

October 14, 2005

Mr. Michele Rochette California Regional Water Quality Control Board San Francisco Bay Region 1515 Clay Street, Suite 1400 Oakland, California 94612

Subject: File No. 07-0733 (JGU) - 2185 Solano Way, Concord, California

Dear Mr. Rochette:

Enclosed for your review is SOMA's "Third Quarter 2005 Groundwater Monitoring, On-Site Free Product Removal and Groundwater Remediation Report" for the subject property.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have any questions or comments.

Sincerely,

Mansour Sepehr, Ph.D., PE Principal Hydrogeologist

Enclosure

cc: Mr. Marcus Shimoff

c/o Mr. Bert Horn w/enclosure

Ms. Sue Loyd w/enclosure CCCHSD 4333 Pacheco Blvd. Martinez, CA 94553



THIRD QUARTER 2005 Groundwater Monitoring, On-site Free Product Removal, and Groundwater Remediation Report

2185 Solano Way
Concord, California

October 14, 2005

Project 2461

Prepared for

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Shimoff and Lager
c/o Mr. Bert Horn
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Prepared by

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Certification

This report has been prepared by SOMA Environmental Engineering, Inc., on behalf of Mr. Marcus Shimoff, (c/o Mr. Bert Horn-Trustee) the property owner of 2185 Solano Way, Concord, California, to comply with the California Regional Water Quality Control Board's requirements for the Third Quarter 2005 groundwater monitoring event.

Mansour Sepehr, Ph.D., P.E. Principal Hydrogeologist



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1.0 Introduction

This report has been prepared by SOMA Environmental Engineering, Inc. (SOMA), on behalf of Mr. Marcus Shimoff, (c/o Mr. Bert Horn-Trustee) the property owner of 2185 Solano Way Concord, California ("the Site"), as illustrated in Figure 1.

Appendix A details the groundwater monitoring procedures used during the Third Quarter 2005 monitoring event.

1.1 Previous Activities

In December of 1998, four gasoline underground storage tanks (USTs) were removed from the Site: one 10,000-gallon, one 8,000-gallon, one 5,000-gallon, and one 4,000-gallon tank. Soil samples collected from beneath the USTs and sidewalls of the excavated areas contained elevated levels of petroleum hydrocarbons. In October 1999, RRM, Inc. (RRM) completed soil over-excavation and disposal activities at the Site. Approximately 7 cubic yards of petroleum hydrocarbon impacted soil were excavated from the former southeastern fuel island area at this time. Figure 2 displays the locations of the former USTs and fuel islands.

On March 14, 2000, RRM installed three on-site shallow groundwater monitoring wells (MW-1, MW-2, and MW-3). Also, in March 2000, groundwater elevation data was measured and groundwater samples were collected. The locations of these monitoring wells are shown in Figure 2. The historical groundwater elevation data and analytical results are shown in Table 1.

On September 22, 2000, SOMA drilled six soil borings (B-1 to B-6) and collected soil and grab groundwater samples beneath the Site and neighboring properties. On October 10 and 11, 2000, SOMA drilled 3 additional soil borings off-site. The soil borings were converted into monitoring wells (MW-4, MW-5, and MW-6). During the well installation, Methyl tertiary Butyl Ether (MtBE) was detected in all of the groundwater samples collected from wells MW-4 to MW-6. This indicated that off-site regions beyond the southern and western borders of the Site have been impacted.

In March 2001, SOMA submitted a workplan to the RWQCB to conduct additional site investigations and perform risk-based corrective action (RBCA) in order to evaluate whether or not soil and groundwater remediation was warranted. In May 2001, eight hydropunches (HP-1 to HP-8) were drilled and soil and groundwater samples were collected from beneath the Site and neighboring properties. The results of this investigation revealed the presence of elevated levels of petroleum hydrocarbons and MtBE in the groundwater. The locations of the hydropunches are displayed in Figure 2.

In June 2001, SOMA completed a RBCA analysis for the Site, which indicated that the Site is a "High Risk" petroleum release site, in which the groundwater has been heavily impacted. A sensitive receptor survey within 500 feet of the Site and further site characterizations were also conducted. SOMA set up a groundwater flow and chemical transport model to design a groundwater extraction system for the Site. SOMA further proposed the installation of an off-site groundwater extraction well at 2837 Eastgate Avenue. In July 2001, SOMA prepared and submitted a Corrective Action Plan (CAP) to the RWQCB.

In January 2002, two CPT holes were logged (one on-site and one off-site to the southwest), four grab groundwater samples were collected at each of the two CPT locations, and two piezometers were installed on-site. PZS-1 was screened in the first water-bearing zone, and PZS-2 was screened in the second water-bearing zone. This investigation was used to evaluate the vertical extent of the on- and off-site chemical plume in the subsurface and to determine the hydrogeologic conditions beneath the on- and off-site areas. A confirmation boring was drilled adjacent to the CPT-1 location, to collect soil samples from selected depths for comparison with the CPT lithologic logging. The locations of the CPTs and piezometers are displayed in Figure 2.

In December 2002, SOMA oversaw the installation of a French drain and extraction well (EX-1); their locations are illustrated in Figure 2. On April 16, 2003, SOMA oversaw the replacement of monitoring well MW-2 with new well MW-2R. Monitoring well MW-2 was replaced due to damages incurred on the well during the installation of the French drain.

A 2-inch passive skimmer (model number TR-252) was installed in monitoring well MW-2 on May 23, 2002, to remove free product from this well. The skimmer was removed from well MW-2 during the French drain installation and later installed in well MW-3. Free product was actively removed from well MW-3 from July 2003 to June 2004. The skimmer was re-installed in well MW-2R, and has actively removed free product at this vicinity since June 2004. Currently, the groundwater remediation system is removing site related contaminants as planned.

2.0 Results

The following sections provide the results of the field measurements and laboratory analyses from the September 15, 2005 groundwater monitoring event.

2.1 Field Measurements

As shown in Table 1, the depth to groundwater in the monitoring wells ranged from 10.65 feet in well MW-6 to 18.78 feet in well MW-2R. The corresponding groundwater elevations ranged from 22.07 feet in well MW-2R to 29.91 feet in

well MW-1. The groundwater elevations and depth to groundwater for the extraction well and French drain risers are also shown in Table 1.

The lowest groundwater elevation detected during this monitoring event was 22.07 feet in well MW-2R. The low groundwater elevation can be attributed to the close proximity of this well to the French drain. The top of casing elevations were based on survey data measured on July 8, 2003. Appendix B includes the survey data.

The groundwater elevations since the previous monitoring event (Second Quarter 2005) decreased in all of the monitoring wells, especially in well MW-2R. Local recharge rates in each well, as well as seasonal fluctuations, contribute to the various groundwater elevations observed throughout the Site. The remedial system has also created an effective capture zone, especially around the French drain.

The groundwater elevation contour map is displayed in Figure 3. As Figure 3 illustrates, the groundwater extraction system, which includes a French drain and extraction well EX-1, is creating excellent groundwater capture zones. The onsite groundwater gradient, which is in the direction of the French drain, is approximately 0.036 feet/feet. The off-site groundwater gradient, which is in the direction of extraction well EX-1, is approximately 0.086 feet/feet. The on and off-site groundwater gradients decreased since the previous monitoring event. During the drier times of the year the water table descends.

The field notes in Appendix B show the detailed measurements of the biodegradation parameters of the groundwater for each well and the center French drain riser. Due to the minimal water available in well MW-2R no field measurements, other than the depth to groundwater within this well, could be recorded. This well is in close proximity to the French drain.

The objective of the natural attenuation study was to evaluate whether the petroleum hydrocarbons found in the groundwater were biodegrading. Therefore, groundwater samples collected during this monitoring event were analyzed for common electron acceptors and other geochemical indicators.

Naturally occurring biological processes can enhance the removal rate of contaminants in the subsurface. During the degradation process, indigenous bacteria that exist in the subsurface utilize the energy released from the transfer of electrons to drive the redox reactions that remove organic mass from contaminated groundwater. The more positive the redox potential of an electron acceptor, the more energetically favorable is the reaction utilizing that electron acceptor. Based on thermodynamic considerations, the most energetically preferred electron acceptor for redox reactions is dissolved oxygen (DO), followed by nitrate, manganese, ferric iron, sulfate, and carbon dioxide, in descending order of preference. Evaluating the distribution of these electron

acceptors can provide evidence of where and to what extent hydrocarbon biodegradation is occurring.

In general, all of the DO concentrations were below the solubility standard of O_2 in the groundwater. The groundwater temperatures, ranged from 20.07°C in well MW-1 to 24.04°C in well MW-4. The solubility standard for DO in groundwater at 24°C , at an atmospheric pressure of 760 mm/Hg, is approximately 8.4 mg/L. DO ranged from 1.36 mg/L in well MW-1 to 3.08 mg/L in well MW-6.

ORP showed negative redox potentials in wells MW-1 and MW-3 to MW-5. Oxidation of petroleum hydrocarbons could have occurred in these monitoring wells at these low DO readings. Negative redox potentials indicate that contaminants in the groundwater are conducive to anaerobic biodegradation.

The presence of Fe²⁺ indicates that the available DO in the subsurface has been consumed and anaerobic bacteria began to utilize other electron acceptors, such as Fe³⁺, NO₃⁻ and SO₄²⁻, to metabolize the dissolved hydrocarbons. Ferrous iron concentrations can thus be used as an indicator of anaerobic biodegradation. Ferrous iron is a product of the reduction reaction of ferric iron and hydrocarbons.

Ferrous iron concentrations were detected throughout the Site, with the exception of well MW-1. Detectable ferrous iron concentrations ranged from 0.32 mg/L in well EX-1 to the maximum allowable equipment tolerance level of 3.30 mg/L in the center French drain riser.

Nitrate was below the allowable equipment tolerance level in all wells and the center French drain riser, with the exception of well MW-1. Nitrate was detected in well MW-1 at 6.5 mg/L. The presence of ferrous iron concentrations in combination with non-detectable nitrate levels is indicative of anaerobic biodegradation beneath the Site.

The absence of sulfate in the groundwater samples may be indicative of an anaerobic methanogenesis process. Sulfate was below the equipment's tolerance level in well MW-5 and extraction well EX-1. Detectable sulfate concentrations ranged from 6 mg/L in well MW-4 to the maximum allowable equipment tolerance level of 80 mg/L in well MW-1 and the center French drain riser.

2.2 Laboratory Analytical Results

Table 1 presents the results of the laboratory analyses on the groundwater samples collected from the monitoring wells, extraction well EX-1, and the French drain. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and Methyl tertiary Butyl Ether (MtBE).

As shown in Table 1, TPH-g was below the laboratory reporting limit in wells MW-1, MW-3, MW-6, extraction well EX-1, and from the sample collected from the French drain. Detectable TPH-g concentrations ranged from 1,690 ug/L in well MW-4 to 32,400 μ g/L in well MW-2R.

Figure 4 displays the contour map of TPH-g concentrations in the groundwater. As illustrated in Figure 4, the TPH-g plume appears to be centrally located in the vicinity east of the French drain. The TPH-g concentration in well MW-2R is several orders of magnitude higher than the remaining site wells.

In wells MW-1, MW-3, MW-6, the center French drain riser, and extraction well EX-1, all BTEX constituents were below the laboratory reporting limit. In well MW-4, both toluene and total xylenes were below the laboratory reporting limit, and benzene and ethylbenzene were at low levels. The highest BTEX analytes were detected in well MW-2R, at 1,010 ug/L, 3,110 ug/L, 1,230 ug/L, and 4,050 ug/L, respectively.

Figure 5 displays the contour map of benzene concentrations in the groundwater. The majority of the benzene plume appears to be centrally located east of the French drain, around well MW-2R. Only trace or non-detectable benzene levels were observed beyond this region.

MtBE was detected in all of the groundwater samples collected during the Third Quarter 2005 monitoring event. MtBE concentrations ranged from 4.6 μ g/L in MW-4 to 1,800 μ g/L in well MW-3. Figure 6 displays the contour map of MtBE concentrations in the groundwater. The most impacted MtBE region appears to be in the southwestern region of the Site, around well MW-3. The MtBE plume has migrated off-site and was detected in all off-site wells. The off-site migration of MtBE can be attributed to the solubility of MtBE in groundwater.

Table 2 presents the results of the laboratory analyses on the groundwater samples for gasoline oxygenates and lead scavengers. The only detected gasoline oxygenate and lead scavenger was TBA. Figure 7 displays the contour map of the TBA concentrations in the groundwater. As illustrated in Figure 7, the most impacted TBA region was located in the southwestern region of the Site, around well MW-3 and the center French drain riser. A high TBA concentration was also detected in extraction well EX-1.

2.3 Historical Analytical Trend

Table 1 also displays the historical TPH-g, BTEX, and MTBE groundwater analytical data. Based on the laboratory analytical results, the following trends for the more impacted monitoring wells MW-2R, MW-3, and MW-5 were observed since the previous monitoring event (Second Quarter 2005).

In on-site well MW-2R:

• TPH-g and MtBE both significantly decreased, both benzene and toluene increased, both ethylbenzene and total xylenes decreased.

In on-site well MW-3:

• TPH-g, toluene, ethylbenzene, and total xylenes all remained below the laboratory reporting limit, benzene decreased, and MtBE significantly decreased.

In on-site well MW-5:

 All BTEX analytes increased, TPH-g increased significantly, and MtBE decreased significantly.

For more detailed TPH-g, BTEX, and MtBE concentration trends refer to Table 1.

TBA has significantly increased throughout the Site's wells.

For more detailed gasoline oxygenate concentration trends refer to Table 2.

Appendix C contains the laboratory report and COC form for the Third Quarter 2005 groundwater monitoring event.

2.4 Free Product Removal

Due to the minimal amount of free product removed from MW-3 in the preceding months, on June 24, 2004, the passive skimmer was removed from well MW-3 and installed in well MW-2R.

Table 3 presents the total volume of free product and contaminated groundwater removed from wells MW-2, MW-2R and MW-3. The total volume of free product and contaminated groundwater removed from the Site is currently 29.32 gallons, as of September 29, 2005.

3.0 Groundwater Treatment System Operation

The remediation system initially began operating in October 2003. The treated groundwater was discharged under the requirements of Order 01-100, NPDES Permit No. CAG912002. During the April 15, 2004 sampling event, TBA was

detected in both the influent and effluent of the remediation system. SOMA notified the RWQCB about the breakthrough of TBA into the effluent of the treatment system.

Due to the difficulty of removing TBA from the groundwater, and based on the approval of the RWQCB, the treatment system was shutdown. On June 1, 2004, SOMA obtained approval from the Central Contra Costa (CCC) Sanitary District to begin discharging the treated groundwater into the on-site sewer main. At the present time, treated groundwater is being discharged into the on-site sewer main. The discharge permit is shown in Appendix D.

Since the system began discharging in October 2003, approximately 1,292,124 gallons of groundwater has been treated and discharged at the Site (as of September 9, 2005). On January 1, 2005, the remedial groundwater system, which consisted of a vacuum air stripper, was taken offline. The groundwater is currently being treated by a GAC system.

As required by the discharge permit, sampling and maintenance of the groundwater treatment system has been performed on a routine basis. Grab groundwater samples have been collected on a routine basis to determine the efficiency of the treatment system in removing TPH-g, MtBE, and benzene from the groundwater beneath the Site.

As shown in Table 4, all TPH-g, MtBE, and BTEX constituents have remained below the allowable discharge permit's requirements. Appendix E presents the most current laboratory report for the treatment system samples.

Table 4 also shows the operational summary of the treatment system. The last carbon change-out on the system occurred on August 31, 2005. At this time, the existing 2,000-pound carbon vessel was removed and replaced with a newer 2,000 pound carbon vessel, and the two 55-gallon carbon drums, each with approximately 200 pounds of carbon, were also replaced.

The cumulative masses of TPH-g, MtBE, and benzene extracted from the groundwater, since the installation of the treatment system, are shown in Table 5. As shown in Table 5, the cumulative masses of TPH-g, MtBE, and benzene removed as of September 9, 2005 are 100.03 pounds, 79.26 pounds, and 3.90 pounds, respectively. The cumulative masses of each of the above referenced constituents are also displayed in Figure 8.

4.0 Conclusions and Recommendations

The findings of the Third Quarter 2005 groundwater monitoring event can be summarized as follows:

• Based on the reported groundwater elevations, the extraction well and French drain are providing excellent capture zones.

- Based on the natural attenuation study, it can be concluded that biodegradation of petroleum hydrocarbons is occurring in the subsurface. In general, low DO concentrations were observed throughout the Site, as well as high negative redox potentials. Nitrate was not detected in wells MW-3 to MW-6, EX-1, and the sample collected from the French drain. Sulfate was not detected in wells MW-5 and EX-1. Based on these factors, anaerobic biodegradation, as well as anaerobic methanogenesis, is possible at this location.
- Based on the analytical results, the highest TPH-g and BTEX concentrations were detected in on-site monitoring well MW-2R. This region still continues to be an impacted source area. However, TPH-g decreased significantly in well MW-2R since the previous monitoring event.
- The highest gasoline oxygenate concentrations, which include MtBE and TBA, appear to be in the southwestern section of the Site. The highest MtBE and TBA concentrations were detected in well MW-3, at 1,800 ug/L and 53,400 ug/L, respectively.
- TBA is formed in the environment through oxidation of MtBE in the atmosphere followed by hydrolysis or through microbial oxidation of MtBE in impacted aquifer materials. As MtBE appears to have decreased significantly in well MW-3, and site-wide, TBA appears to have significantly increased site-wide.

The following continuous on-site remedial observations were observed.

- As of September 29, 2005, approximately 29.32 gallons of contaminated groundwater and free product have been removed from wells MW-2, MW-2R, and MW-3.
- As of September 9, 2005, approximately 1,292,124 gallons of groundwater has been treated and discharged at the Site.
- The cumulative masses of TPH-g, MtBE and benzene removed from the groundwater and treated by the treatment system are 100.03 pounds, 79.26 pounds, and 3.90, respectively, as of September 9, 2005.

Based on the results of this monitoring event, SOMA recommends:

- Continuing the quarterly monitoring programs to better understand the seasonal variation in the groundwater quality conditions and rate of contaminant removal.
- Further monitoring of the bio-attenuation parameters in the groundwater.
 This will aid in determining if biodegradation is feasible for the significant reduction of petroleum hydrocarbon concentrations in the areas of contamination.
- Routine monitoring of the Site remedial activities to determine the efficiency of the treatment system in removing contaminant mass in the groundwater, especially in the region of wells MW-2R and MW-3.
- Based on the recent low free product recovery rate from well MW-2R, the free product removal from this well may be temporarily terminated. However, due to the elevated TPH-g levels observed in well MW-2R, injection of hydrogen peroxide (Fenton's reagent) may be warranted.
- Based on the continuing non-detectable nitrate concentrations observed during the quarterly monitoring events, SOMA recommends injecting nitrate into all of the site wells to enhance biodegradation in the groundwater at these locations.
- Based on the increased TBA levels observed during this monitoring event, SOMA recommends injecting peroxide reagents into the Site's wells to decrease the levels of TBA.

Tables

Table 1
Historical Groundwater Elevation Data & Analytical Results
2185 Solano Way, Concord, California

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (μg/L)	MtBE ¹ (μg/L)
MW-1	Mar-00	101.40	6.75	94.65	3500	31	3.4	140	250	520
	Oct-00	101.40	11.55	89.85	NA	NA	NA	NA	NA	NA
	Feb-01	101.40	10.70	90.70	650	16	4.2	21	6	420
	May-01	101.40	9.59	91.81	160	5.9	1.0	2.7	2.5	420
	Aug-01	101.40	11.37	90.03	250	5.5	2.3	5.5	13	470
	Oct-01	101.40	11.92	89.48	140	5	4.4	4.2	10.9	310
	Feb-02	101.40	8.72	92.68	240	9.7	4.2	11	6.3	160
	May-02	101.40	9.30	92.10	64	0.81	<0.5	<0.5	< 0.5	110
	Jul-02	101.40	10.65	90.75	110	1.90	< 0.5	2.8	4.3	130
	Nov-02	101.40	10.85	90.55	<50	<0.5	<0.5	<0.5	<0.5	160
	Feb-03	101.40	8.26	93.14	<50	0.58	<0.5	0.66	0.85	43
	May-03 ²	40.78	8.23	32.55	<50	<0.5	<0.5	<0.5	0.54	18
	Aug-03	40.78	10.74	30.04	<50	<0.5	<0.5	<0.5	<0.5	29
	Oct-03	40.78	11.91	28.87	<50	<0.5	<0.5	<0.5	<0.5	33
	Feb-04	40.78	9.69	31.09	<50	<0.5	<0.5	<0.5	<0.5	25
	Apr-04	40.78	8.85	31.93	<50	<0.5	<0.5	<0.5	< 0.5	16
	Jul-04	40.78	10.45	30.33	<50	<0.5	<0.5	<0.5	<0.5	15
	Oct-04	40.78	11.74	29.04	<50	<0.5	<0.5	<0.5	<0.5	15
	Feb-05	40.78	7.06	33.72	<50	<2.0	<2.0	<2.0	<2.0	290
	Apr-05	40.78	7.13	33.65	332	3.39	9.49	8.59	39.20	102
	Sep-05	40.78	10.87	29.91	<50	<0.5	<2.0	<0.5	<1.0	5.97
MW-2	Mar-00	101.38	8.85	92.53	180,000	17,000	29,000	3,800	21,000	180,000
IVI VV-Z	Oct-00	101.38	13.80	92.53 87.58	NA	17,000 NA	29,000 NA	3,800 NA	21,000 NA	NA
	Feb-01	101.38	12.14	89.24	14,000	19,000	37,000	3,600	26,600	79,000
	May-01	101.38	10.72	90.66	150,000	13,000	30,000	3,600	19,800	62,000
	Aug-01	101.38	11.77	89.61	NA	NA	NA	NA	NA	NA
	Oct-01	101.38	12.35	89.03	NA	NA	NA	NA	NA	NA
	Feb-02	101.38	10.31	91.07	190,000 ³	63,902 ³	NA	NA	NA	3,590,000 3,4
	May-02	101.38	10.57	90.81	190,000 ³	63,902 ³	NA	NA	NA	$3,590,000^{3,4}$
	Jul-02	101.38	NM	NM	190,000 ³	63,902 ³	NA	NA	NA	3,590,000 3,4
	Nov-02	101.38	11.10	90.28	29,000 H	63	270	220	770	130
	Feb-03	101.38	NM	NM	NA	NA	NA	NA	NA	NA
	Apr-03	101.38	AB	AB	AB	AB	AB	AB	AB	AB

Table 1
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2185 Solano Way, Concord, California

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (μg/L)	MtBE ¹ (μg/L)
MW-2R*	May-03 ^{2,5}	40.85	10.54	30.31	840	140	4.8 C	23	27.6	260
	Aug-03	40.85	11.96	28.89	440	220	7.6	30	23.1	570
	Oct-03	40.85	12.59	28.26	13000	1500	2700	480	2040	490
	Feb-04	40.85	17.54	23.31	56000	2500	6600	1300	7000	370
	Apr-04	40.85	12.34	28.51	69,000	810	3,300	2,100	11,500	550
	Jul-04	40.85	12.40	28.45	55,000	470	1,900	1,900	10,500	170
	Oct-04	40.85	13.00	27.85	100,000	8,400	11,000	3,000	14,000	730
	Feb-05	40.85	11.29	29.56	78,000	1,700	8,000	2,800	15,700	580
	Apr-05	40.85	11.46	29.39	104,000	662	1,590	1,510	8,210	636
	Sep-05	40.85	18.78	22.07	32,400	1,010	3,110	1,230	4,050	44.7
MW-3	Mar-00	101.27	9.95	91.32	200,000	8,400	5,600	2,400	8,700	490,000
	Oct-00	101.27	11.85	89.42	NA	NA	NA	NA	NA	NA
	Feb-01	101.27	11.08	90.19	5,600	2,300	520	<200	1,250	290,000
	May-01	101.27	10.49	90.78	5,300	1,400	190	110	178	270,000
	Aug-01	101.27	11.72	89.55	3,200	<630	<630	<630	<630	210,000
	Oct-01	101.27	12.10	89.17	94	920	<630	<630	<630	140,000
	Feb-02	101.27	9.81	91.46	18,000	3,000	640	790	930	350,000
	May-02	101.27	10.30	90.97	190,000 ³	63,902 ³	NA	NA	NA	3,590,000 3,4
	Jul-02	101.27	11.30	89.97	4,300	1,100	< 100	110	190	140,000
	Nov-02	101.27	11.21	90.06	7,800 Z	2,200	43	120	84 C	170,000
	Feb-03	101.27	9.82	91.45	5,100	910	210	87	326	190,000
	May-03 ²	40.29	10.06	30.23	4,800	840	130	91	216	170,000
	Aug-03	40.29	11.64	28.65	8,700	520	57 C	89	296	160,000
	Oct-03	40.29	12.28	28.01	2,000	170	3.4 C	21	38.6 C	100,000
	Feb-04	40.29	12.24	28.05	1,700	240	74	36	94	10,000
	Apr-04	40.29	13.32	26.97	1,600	620	49	66	140	5,100
	Jul-04	40.29	11.92	28.37	860	230	3.2 C	46	36.4	3,800
	Oct-04	40.29	12.31	27.98	500	87	2.1 C	18	15.5	2,600
	Feb-05	40.29	10.40	29.89	1,900	270	97	<63	100	8,600
	Apr-05	40.29	10.40	29.89	<21,500	305	<53.8	<53.8	<108	22,300
	Sep-05	40.29	12.35	27.94	<4620	<46.2	<185	<46.2	<92.5	1,800

Table 1
Historical Groundwater Elevation Data & Analytical Results
2185 Solano Way, Concord, California

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (μg/L)	MtBE ¹ (μg/L)
MW-4	Oct-00	100.00	11.30	88.70	3,400	30	53	170	42	10,900
	Feb-01	100.00	11.41	88.59	5,600	4.8	3.0	110	24.8	1,900
	May-01	100.00	11.07	88.93	3,900	13	23	210	49.2	1,100
	Aug-01	100.00	11.88	88.12	4,400	5	<4.2	52	11.0	1,100
	Oct-01	100.00	10.92	89.08	2,600	7.7	<4.2	26	11	1,600
	Feb-02	100.00	10.98	89.02	4,000	19	3.7	43	7.6	3,400
	May-02	100.00	11.28	88.72	2,900	28 ^c	<2.5	15	5.9	4,600
	Jul-02	100.00	11.65	88.35	2,400	6.8 C	< 5.0	14	< 5.0	2,200
	Nov. 02	100.00	11.59	88.41	3,400 H	<0.5	<0.5	15	9.01 C	1,700
	Feb-03	100.00	10.88	89.12	3,200	<5.0	<5.0	12	24.6	6,500
	May-03 ²	39.56	11.09	28.47	2,900	<0.5	<0.5	8.5	1.4 C	8,200
	Aug-03	39.56	11.87	27.69	1,700	<2.5	5.2	3.0	<2.5	7,200
	Oct-03	39.56	11.97	27.59	1,200	<0.5	<0.5	2.1	<0.5	3,800
	Feb-04	39.56	11.26	28.30	1,300	<2.5	<2.5	4.6	<2.5	2,400
	Apr-04	39.56	11.38	28.18	1,600	6.4 C	<0.5	4.4	0.82	330
	Jul-04	39.56	11.84	27.72	1,200	3.9 C	<0.5	3.1 C	0.51 C	32
	Oct-04	39.56	11.99	27.57	810	5.1 C	<0.5	4.3	0.70	9.8 14
	Feb-05 Apr-05	39.56 39.56	10.87 10.87	28.69 28.69	2,200 6,930	1.5 0.69	<0.7 <0.5	3.4 6.07	1.20 <1.0	10.7
	Sep-05	39.56	11.50	28.06	1,690	2.73	<0.5 < 2.0	1.88	<1.0 <1.0	4.6
	оер-оз	33.30	11.30	20.00	1,030	2.73	\Z.U	1.00	\1.0	7.0
MW-5	Oct-00	100.04	11.40	88.64	1,700	205	58	60	26	96,670
	Feb-01	100.04	10.56	89.48	5.800	46	25	57	47.7	54.000
	May-01	100.04	10.40	89.64	6,000	140	29	48	39.8	80,000
	Aug-01	100.04	11.20	88.84	4,700	<170	<170	<170	<170	40,000
	Oct-01	100.04	11.30	88.74	6,000	<170	<170	<170	<170	42,000
	Feb-02	100.04	10.19	89.85	5,000	70	<50	<50	<50	73,000
	May-02	100.04	10.29	89.75	5,800	190	19 ^c	45	32	120,000
	Jul-02	100.04	10.92	89.12	4,400	< 100	< 100	< 100	< 100	56,000
	Nov. 02	100.04	10.84	89.20	5,000 H	72	<0.5	32	10.5 C	26,000
	Feb-03	100.04	9.94	90.10	6,200	150	<5.0	48	12	89,000
	May-03 ²	38.14	NM	NM	NA	NA	NA	NA	NA	NA
	Aug-03	38.14	10.97	27.17	5,000	76 C	<25	<25	<25	64,000
	Oct-03	38.14	11.28	26.86	7,100	<0.5	<0.5	5.2 C	10.77 C	25,000
	Feb-04	38.14	10.39	27.75	4,000	55	<5.0	16 C	7.9 C	19,000
	Apr-04	38.14	10.50	27.64	6,000	87	<13	32	<13	27,000
	Jul-04	38.14	10.98	27.16	6,500	44	<13	30	<13	13,000
	Oct-04	38.14	11.42	26.72	6,100	110	<1.0	23	8.4	1,300
	Feb-05	38.14	10.08	28.06	4,400	42	<4.2	12	6.3	860
	Apr-05	38.14	10.15	27.99	<8600	27.5	<21.5	<21.5	<43	1,680
	Sep-05	38.14	11.29	26.85	10,200	59.4	4.34	14.4	3.43	124

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2185 Solano Way, Concord, California

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (μg/L)	MtBE ¹ (μg/L)
MW-6	Oct-00	99.76	11.50	88.26	80	<0.5	4	<0.5	1.7	85
	Feb-01	99.76	10.62	89.14	64	0.63	1.2	<0.5	2.7	54
	May-01	99.76	10.20	89.56	<50	<0.5	<0.5	<0.5	0.56	58
	Aug-01	99.76	10.86	88.90	<50	<0.5	1.2	0.9	3.80	47
	Oct-01	99.76	12.50	87.26	88	3.0	3.8	3.8	11.1	54
	Feb-02	99.76	9.98	89.78	<50	<0.50	<0.50	<0.50	<0.50	43
	May-02	99.76	10.16	89.60	65	0.84 ^c	1.1	1.4	4.6	42
	Jul-02	99.76	10.56	89.20	< 50	< 0.5	< 0.5	< 0.5	< 0.5	31
	Nov-02	99.76	10.52	89.24	<50	<0.5	<0.5	<0.5	<0.5	32
	Feb-03	99.76	9.82	89.94	<50	<0.5	<0.5	<0.5	<0.5	33
	May-03 ²	37.85	9.99	27.86	<50	<0.5	<0.5	<0.5	<0.5	30
	Aug-03	37.85	10.64	27.21	<50	<0.5	<0.5	<0.5	<0.5	34
	Oct-03	37.85	10.91	26.94	<50	<0.5	<0.5	<0.5	<0.5	31
	Feb-04	37.85	9.92	27.93	<50	<0.5	<0.5	<0.5	<0.5	33
	Apr-04	37.85	10.07	27.78	<50	<0.5	<0.5	<0.5	<0.5	39
	Jul-04	37.85	10.60	27.25	<50	<0.5	<0.5	<0.5	<0.5	57
	Oct-04	37.85	10.78	27.07	<50	<0.5	<0.5	<0.5	<0.5	160
	Feb-05	37.85	9.62	28.23	<50	<1.7	<1.7	<1.7	<1.7	280
	Apr-05	37.85	9.80	28.05	<200	<0.5	<0.5	<0.5	<1.0	249
	Sep-05	37.85	10.65	27.20	<100	<1.0	<4.0	<1.0	<2.0	247
		44.00	44.00	22.22	0.4.0.0	1000	0.5	100	0.5	0.1.000
FDC	Aug-03	41.29	11.63	29.66	3100	1800	<25	130	<25	94,000
	Oct-03	41.29	12.15	29.14	4900	1200	130	210	490	110,000
	Feb-04	41.29	16.21	25.08	2100	170	<17	130	45 NA	3,300
	Apr-04	41.29	14.83	26.46	NA	NA	NA	NA	NA	NA
	Jul-04 Oct-04	41.29 41.29	15.98 15.20	25.31 26.09	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
ŀ	Feb-05	41.29	16.20	25.09	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	Apr-05	41.29	16.24	25.05	NA NA	NA NA	NA NA	NA NA	NA NA	NA NA
	Sep-05	41.29	14.10	27.19	<5380	<53.8	<215	<53.8	<108	342
		0	14.10	27.13	10000	100.0	12.0	100.0	1.00	<u> </u>
FDE	Aug-03	40.21	11.30	28.91	NA	NA	NA	NA	NA	NA
	Oct-03	40.21	11.94	28.27	NA NA	NA	NA	NA NA	NA	NA NA
ł	Feb-04	40.21	14.62	25.59	NA	NA	NA	NA	NA	NA
	Apr-04	40.21	12.10	28.11	NA	NA	NA	NA	NA	NA
	Jul-04	40.21	12.66	27.55	NA	NA	NA	NA	NA	NA
	Oct-04	40.21	12.41	27.80	NA	NA	NA	NA	NA	NA
ľ	Feb-05	40.21	15.50	24.71	NA	NA	NA	NA	NA	NA
	Apr-05	40.21	15.42	24.79	NA	NA	NA	NA	NA	NA
	Sep-05	40.21	14.60	25.61	NA	NA	NA	NA	NA	NA

Table 1 Historical Groundwater Elevation Data & Analytical Results 2185 Solano Way, Concord, California

Monitoring Well	Date	Top of Casing (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	TPH-g (μg/L)	Benzene (μg/L)	Toluene (μg/L)	Ethyl- benzene (μg/L)	Total Xylenes (μg/L)	MtBE ¹ (μg/L)
FDW	Aug-03	40.18	11.55	28.63	NA	NA	NA	NA	NA	NA
	Oct-03	40.18	12.28	27.90	NA	NA	NA	NA	NA	NA
	Feb-04	40.18	13.98	26.20	NA	NA	NA	NA	NA	NA
	Apr-04	40.18	12.02	28.16	1,000	780	5.7 C	54	9.2 C	6,700
	Jul-04	40.18	12.92	27.26	820	200	< 5.0	59	< 0.5	8,400
	Oct-04	40.18	13.10	27.08	400	7.3	< 0.5	4.3	2.14	90
	Feb-05	40.18	13.07	27.11	590	140	<31	<31	<31	4,700
	Apr-05	40.18	12.40	27.78	<4300	313	16	88.6	136.8	5,730
	Sep-05	40.18	13.10	27.08	NA	NA	NA	NA	NA	NA
EX-1	Aug-03	37.58	10.44	27.14	NA	NA	NA	NA	NA	NA
	Oct-03	37.58	10.71	26.87	NA	NA	NA	NA	NA	NA
	Feb-04	37.58	15.98	21.60	NA	NA	NA	NA	NA	NA
	Apr-04	37.58	16.33	21.25	NA	NA	NA	NA	NA	NA
	Jul-04	37.58	16.34	21.24	NA	NA	NA	NA	NA	NA
	Oct-04	37.58	16.10	21.48	3,000	46	8.0 C	8.1	3.2	5,600
	Feb-05	37.58	16.38	21.20	2,900	<20	<20	<20	<20	3,200
	Apr-05	37.58	15.59	21.99	<8600	23.2	<21.5	<21.5	<43	2,870
	Sep-05	37.58	14.46	23.12	<2150	<21.5	<86	<21.5	<43	461

Notes:

- AB: Abandoned. MW-2 was abandoned and replaced with MW-2R on April 16, 2003.
- C: Presence confirmed, but confirmation concentration differed by more than a factor of two.
- H: Heavier hydrocarbons contributed to the quantitation.
- NA: Not analyzed. Well MW-2 not analyzed due to free product in well from Feb 2002 to July 2002. Free Product in well MW-3 in May 2002 MW-2 was not analyzed in Feb 2003 due construction activities.
 - MW-5 was not analyzed in the Second Quarter 2003, the well was inaccessible, a car was parked over well.
- NM: Not Measured. Well MW-2 was not measured due to construction activities in this area. The well was inaccessible.
 - MW-5 was not measured in the 2nd Q 03 GW event, due to a car parked over the well. The well was inaccessible.
- Z: Sample exhibits unknown single peak or peaks.
- <: Not Detected above the laboratory reporting limit.
- MtBE confirmed by EPA Method 8260B.
- The wells were re-surveyed by Kier & Wright Engineers Surveyors, Inc of Pleasanton, CA on July 8, 2003. The new elevations are based on the assumed datum of 33.71 NAVD88.
- 3 Concentrations for MW-2 (Feb 2002-Jul 2002), MW-3 (May 2002) were estimated based on solubilty rates and mole ratios at 28C.
- Solubility for MtBE concentration (MW-2 (Feb 2002 to Jul 2002), MW-3 (May 2002) was based on gasoline consisting of 10% MtBE.
- MW-2R replaced monitoring well MW-2 during the Second Quarter 2003. Well MW-2 was damaged during installation of the French drain.

The first time the French drain center riser was sampled was during the Third Quarter 2003.

The first time the French drain west riser was sampled was during the Second Quarter 2004.

EX-1 and the French drain risers (center, east, and west) were first measured for groundwater elevations during the

Third Quarter 2003. The system was not operational during the Third Quarter 2003 monitoring event.

Table 2 Groundwater Analytical Results Gasoline Oxygenates & Lead Scavengers

2185 Solano Way, Concord, California

Monitoring Well	Date	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2-DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)
MW-1	Apr-04 Jul-04	<10 <10	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<0.5 <0.5	<1,000 <1,000
	Oct-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	Feb-05	1,400	<2.0	<2.0	<2.0	<2.0	<2.0	<4,000
	Apr-05	<2.5	<0.5	<0.5	<2.0	<0.5	<0.5	<1,000
	Sep-05	29.8	<0.5	<0.5	<2.0	<0.5	<0.5	<1,000
MW-2R	Apr-04	<83	<4.2	<4.2	<4.2	<4.2	<4.2	<8,300
	Jul-04	<71	<3.6	<3.6	<3.6	<3.6	<3.6	<7,100
	Oct-04	<250	<13	<13	<13	170	<13	<25,000
	Feb-05	<830	<42	<42	<42	<42	<42	<83,000
	Apr-05	<269	<53.8	<53.8	<215	<53.8	<53.8	<108,000
	Sep-05	660	<10.8	<10.8	<43	<10.8	<10.8	<21,500
MW-3	Apr-04	68,000	<50	<50	<50	<50	<50	<100,000
	Jul-04	69,000	<20	<20	<20	<20	<20	<40,000
	Oct-04	43,000	<31	<31	<31	<31	<31	<63,000
	Feb-05	76,000	<63	<63	<63	<63	<63	<130,000
	Apr-05	4,770	<53.8	<53.8	<215	<53.8	<53.8	<108,000
	Sep-05	53,400	<46.2	<46.2	<185	<46.2	<46.2	<92,500
MW-4	Apr-04	3,000	<2.5	<2.5	<2.5	<2.5	<2.5	<5,000
	Jul-04	2,500	1.2	<0.7	<0.7	<0.7	<0.7	<1,400
	Oct-04	990	<0.7	<0.7	<0.7	<0.7	<0.7	<1,400
	Feb-05	1,200	<0.7	<0.7	<0.7	<0.7	<0.7	<1,400
	Apr-05	922	0.89	<0.5	<2.0	<0.5	<0.5	<1,000
	Sep-05	332	<0.5	<0.5	<2.0	<0.5	<0.5	<1,000
MW-5	Apr-04	<5,000	<250	<250	<250	<250	<250	<500,000
	Jul-04	14,000	<36	<36	<36	<36	<36	<71,000
	Oct-04	1,400	<10	<10	<10	<10	<10	<20,000
	Feb-05	4,900	<4.2	<4.2	<4.2	<4.2	<4.2	<8,300
	Apr-05	3,470	<21.5	<21.5	<86	<21.5	<21.5	<43,000
	Sep-05	856	<0.5	<0.5	<2.0	<0.5	<0.5	<1,000

Table 2 Groundwater Analytical Results Gasoline Oxygenates & Lead Scavengers

2185 Solano Way, Concord, California

Monitoring Well	Date	TBA (μg/L)	DIPE (μg/L)	ETBE (μg/L)	TAME (μg/L)	1,2-DCA (μg/L)	EDB (μg/L)	Ethanol (μg/L)
MW-6	Apr-04	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<1,000
	Jul-04	<10	<0.5	<0.5	< 0.5	<0.5	< 0.5	<1,000
	Oct-04	<25	<1.3	<1.3	<1.3	<1.3	<1.3	<2,500
	Feb-05	<33	<1.7	<1.7	<1.7	<1.7	<1.7	<3,300
	Apr-05	<2.5	<0.5	<0.5	<2.0	<0.5	<0.5	<1,000
	Sep-05	41.9	<1.0	<1.0	<4.0	<1.0	<1.0	<2,000
French Drain 8	k Extraction \	Nell (EX-1)						
F.D.West	Apr-04	41,000	<3.6	<3.6	<3.6	<3.6	<3.6	<7,100
	Jul-04	67,000	<50	<50	<50	<50	<50	<100,000
	Oct-04	39,000	<17	<17	<17	<17	<17	<33,000
	Feb-05	9,000	<31	<31	<31	<31	<31	<63,000
	Apr-05	6,910	<10.8	<10.8	<43	<10.8	<10.8	<21,500
F.D.Center	Sep-05	52,400	<53.8	<53.8	<215	<53.8	<53.8	<108,000
EX-1	Oct-04	12,000	<36	<36	<36	<36	<36	<71,000
	Feb-05	24,000	<20	<20	<20	<20	<20	<40,000
	Apr-05	<108	<21.5	<21.5	<86	<21.5	<21.5	<43,000
	Sep-05	25,500	<21.5	<21.5	<86	<21.5	<21.5	<43,000

Notes:

<: Not detected above the laboratory reporting limit.

Gasoline Oxygenates: Lead Scavengers: TBA: tertiary butyl alcohol 1,2-Dichloroethane DIPE: Isopropyl ether EDB: 1,2-Dibromoethane

ETBE: Ethyl tertiary butyl ether TAME: Methyl tertiary amyl ether

Ethanol

Since the 2nd Q 2004 monitoring event, grab groundwater samples have been tested for gasoline oygenates, lead scavengers, and ethanol to determine the extent of gasoline oxygenate impact to the groundwater.

Table 3

Total Volume of Free Product Removed
2185 Solano Way, Concord, California

			MW-2	
Date	Total Volume of Free Product Collected (gal.)*	Volume of Contaminated Water Collected in Skimmer (gal.)*	Volume of Contaminated Water Collected by Bailer (gal.)**	Total Volume of Contaminated Water & Free Product Removed (gal.)
		2002		
		MW-2	1	
05/23/02	Passive Car	nister Installed	3.00	3.000
5/31/2002 ¹	0.092	0.092	0.000	0.184
6/10/2002 ²	0.031	0.169	0.500	0.699
6/14/2002 ²	0.023	0.153	1.000	1.176
6/21/2002 ²	0.003	0.184	1.000	1.187
6/26/2002 ¹	0.460	0.230	2.392	3.082
7/5/2002 ²	0.003	0.092	1.000	1.095
7/19/2002	0.010	0.001	0.420	0.431
7/26/2002	0.010	0.062	1.380	1.452
8/2/2002 ³				
8/13/2002 ⁴	0.017		1.000	1.017
8/23/2002	0.015	0.01	1.000	1.025
9/4/2002	0.000	0	1.000	1.000
9/12/2002	0.008	0.060	1.000	1.068
9/19/2002	0.000	0.73	2.250	2.980
9/25/2002	0.003	0.06	1.500	1.563
10/21/2002	0.000	0	0.500	0.500
10/30/2002	0.001	0.006	0.828	0.835
11/5/2002	0.001	0.003	NB	0.004
11/14/2002	0.004	0	2.010	2.014
11/20/2002	0.001	0	1.520	1.521
12/6/2002	0.003	0.04	1.000	1.043

Table 3

Total Volume of Free Product Removed
2185 Solano Way, Concord, California

			MW-2	
Date	Total Volume of Free Product Collected (gal.)*	Volume of Contaminated Water Collected in Skimmer (gal.)*	Volume of Contaminated Water Collected by Bailer (gal.)**	Total Volume of Contaminated Water & Free Product Removed (gal.)
		MW-3		
		2003		
7/22/2003	0.000	0.030	NB	0.030
7/30/2003	0.000	0.024	NB	0.024
8/6/2003	0.001	0.011	NB	0.013
8/12/2003	0.001	0.011	NB	0.013
8/20/2003	0.000	0.011	NB	0.011
8/26/2003	0.000	0.031	NB	0.031
9/10/2003	0.000	0.061	NB	0.061
9/19/2003	0.000	0.031	NB	0.031
9/23/2003	0.000	0.061	NB	0.061
10/3/2003	0.000	0.031	NB	0.031
10/9/2003	0.007	0.046	NB	0.053
10/16/2003	0.004	0.046	NB	0.050
10/23/2003	0.007	0.031	NB	0.038
10/29/2003	0.011	0.031	NB	0.042
11/5/2003	0.015	0.031	NB	0.045
11/12/2003	0.015	0.031	NB	0.045
11/26/2003	0.018	0.031	NB	0.049
12/2/2003	0.074	0.061	NB	0.135
12/10/2003	0.066	0.031	NB	0.097
12/16/2003	0.040	0.061	NB	0.102
12/23/2004	0.033	0.061	NB	0.094
12/31/2003	0.011	0.092	NB	0.103
		2004		
1/6/2004	0.031		NB	0.031
1/13/2004	0.031		NB	0.031
1/19/2004	0.031		NB	0.031
1/27/2004	0.031		NB	0.031
2/3/2004	0.061		NB	0.061
2/10/2004	0.031		NB	0.031
2/17/2004	0.031		NB	0.031
2/25/2004	0.031		NB	0.031
3/2/2004				0.000
3/11/2004				0.000
3/18/2004				0.000
3/23/2004				0.000
3/31/2004				0.000
4/5/2004	0.015		NB	0.015
4/15/2004			NB	0.000

Table 3

Total Volume of Free Product Removed
2185 Solano Way, Concord, California

			MW-2	
Date	Total Volume of Free Product Collected (gal.)*	Volume of Contaminated Water Collected in Skimmer (gal.)*	Volume of Contaminated Water Collected by Bailer (gal.)**	Total Volume of Contaminated Water & Free Product Removed (gal.)
		MW-2R*	•	
6/24/2004	0.008		NB	0.008
6/28/2004	0.004		NB	0.004
7/6/2004			NB	0.000
7/14/2004			NB	0.000
7/21/2004			NB	0.000
7/27/2004	0.004		NB	0.004
8/4/2004	0.004		NB	0.004
8/10/2004			NB	0.000
8/18/2004			NB	0.000
8/25/2004	0.004		NB	0.004
9/3/2004	0.015		NB	0.015
9/10/2004	0.015		NB	0.015
9/16/2004	0.015		NB	0.015
9/24/2004	0.004		NB	0.004
10/1/2004	0.008		NB	0.008
10/8/2004	0.008		NB	0.008
10/13/2004	0.008		NB	0.008
10/20/2004	0.008		NB	0.008
10/29/2004	0.031		NB	0.031
11/5/2004	0.031		NB	0.031
11/12/2004	0.031		NB	0.031
11/18/2004	0.031		NB	0.031
11/24/2004	0.031		NB	0.031
12/2/2004	0.061		NB	0.061
12/10/2004	0.061		NB	0.061
12/14/2004	0.092		NB	0.092
12/22/2004	0.061		NB	0.061
12/29/2004	0.092		NB	0.092

Table 3
Total Volume of Free Product Removed
2185 Solano Way, Concord, California

			MW-2	
Date	Total Volume of Free Product Collected (gal.)*	Volume of Contaminated Water Collected in Skimmer (gal.)*	Volume of Contaminated Water Collected by Bailer (gal.)**	Total Volume of Contaminated Water & Free Product Removed (gal.)
		2005		
1/7/2005	0.092		NB	0.092
1/11/2005	0.092		NB	0.092
1/21/2005	0.092		NB	0.092
1/28/2005	0.061		NB	0.061
2/3/2005	0.061		NB	0.061
2/11/2005	0.061		NB	0.061
2/16/2005	0.031		NB	0.031
3/17/2005	0.031		NB	0.031
4/4/2005	0.031		NB	0.031
4/15/2005	0.061		NB	0.061
4/20/2005	0.031		NB	0.031
4/25/2005	0.031		NB	0.031
5/2/2005	0.031		NB	0.031
5/12/2005	0.061		NB	0.061
5/18/2005	0.061		NB	0.061
6/17/2005	0.061		NB	0.061
6/21/2005	0.031		NB	0.031
6/28/2005	0.031		NB	0.031
8/3/2005	0.046		NB	0.046
8/8/2005	0.046		NB	0.046
8/26/2005	0.008		NB	0.008
8/31/2005	0.031		NB	0.031
9/9/2005	0.046		NB	0.046
9/13/2005	0.031		NB	0.031
9/20/2005	0.046		NB	0.046
9/29/2005	0.015		NB	0.015
Total	2 12	1 00	24 20	20.22
Total	3.12	1.90	24.30	29.32

Notes:

The skimmer was removed from well MW-2 due to construction activities during the French drain installation, the skimmer was re-installed in well MW-3.

No free product was observed in the skimmer from 3/2/04 to 4/5/04, 2/25/05 to 3/11/05

^{*} The skimmer was moved from MW-3 to MW-2R on June 24, 2004

¹ Some water in canister

² Mostly water in canister

³ Passive canister removed and taken to E.I. for servicing

⁴ Passive canister was re-installed after being serviced at E.I.

 $^{^{\}mbox{\scriptsize NB:}}$ Not bailed contaminated water and free product removed only from skimmer.

Table 3 Total Volume of Free Product Removed 2185 Solano Way, Concord, California

	MW-2						
Date	Total Volume of Free Product Collected (gal.)*	Volume of Contaminated Water Collected in Skimmer (gal.)*	Volume of Contaminated Water Collected by Bailer (gal.)**	Total Volume of Contaminated Water & Free Product Removed (gal.)			

Table 4

Total Volume of Treated Water, Historical Operational Data, and
Historical Effluent Chemical Analytical Results
2185 Solano Way,Concord

	Volume TPH-g MtBE ¹ Benzene Toluene Ethylbenzene Total Xylenes									
Date	(gallons)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)			
2003										
27-Oct-03	190	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
31-Oct-03	1,860	<50	<2.0	<0.5	<0.5	<0.5	< 0.5			
14-Nov-03	4,700	<50	<2.0	<0.5	<0.5	<0.5	< 0.5			
17-Nov-03	13,540	<50	<0.5	<0.5	<0.5	<0.5	<0.5			
	2004									
6-Jan-04	18,500	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
7-Jan-04	25,500	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
13-Jan-04	51,000	<50	<2.0	<0.5	< 0.5	<0.5	< 0.5			
*19-Jan-04	75,560	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
*21-Jan-04	83,210	<50	<2.0	<0.5	< 0.5	<0.5	< 0.5			
28-Jan-04	106,510	<50	<2.0	<0.5	< 0.5	<0.5	< 0.5			
3-Feb-04	127,010	<50	<2.0	<0.5	<0.5	<0.5	< 0.5			
10-Feb-04	151,300	<50	<2.0	<0.5	< 0.5	<0.5	< 0.5			
19-Feb-04	184,720		carbon change	e-out 2000 lb v	essel, 2 55-ga	allon polishing ve	ssels			
25-Feb-04	203,620	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
*2-Mar-04	233,840	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
9-Mar-04	252,800	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
18-Mar-04	261,300	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
23-Mar-04	276,430	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
31-Mar-04	280,222	<50	<2.0	<0.5	<0.5	<0.5	<0.5			

Table 4
Total Volume of Treated Water, Historical Operational Data, and
Historical Effluent Chemical Analytical Results
2185 Solano Way,Concord

	Volume	TPH-g	MtBE 1	Benzene	Toluene	Ethylbenzene	Total Xylenes			
Date	(gallons)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)			
2004										
5-Apr-04	298,210	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
15-Apr-04	328,040	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
16-Apr-04	329,020	system shut-down due to TBA detected in effluent sample, discharge permit changed from NPDES to CCC Sanitary District discharge permit								
17-May-04	329,020	flow meter switched to a digital instantaneous meter (GPI 09 Computer Electronics)								
8-Jun-04	329,020		LEL r	neter Safe T N	let 100 install	ed on system				
10-Jun-04	329,020	Meeting w/ CCC Sanitary District to show District install of flow meter and LEL meter								
14-Jun-04	329,170	Calibration of flow meter by Aqua Sierra, start-up of system, initial discharge to CCC Sanitary District								
14-Jun-04	329,320	<50	NA	<0.5	<0.5	<0.5	<0.5			
6-Jul-04	355,053	<50	NA	<0.5	<0.5	<0.5	<0.5			
4-Aug-04	371,123	<50	NA	<0.5	<0.5	<0.5	<0.5			
10-Sep-04	414,343	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
		-								
8-Oct-04	463,370	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
12-Nov-04	549,217	<50	10.8	<0.5	<0.5	<0.5	<1.0			
10-Dec-04	620,760	<50	<0.5	<0.5 2005	<0.5	<0.5	<1.0			
7 1 05	740.400	50			0.5	0.5	0.5			
7-Jan-05	710,180 722,070	<50	94	<0.5	<0.5	<0.5 allon polishing ve	<0.5			
11-Jan-05	•	50								
3-Feb-05	778,030	<50	<0.5 <10.8	<0.5 <10.8	<0.5	<0.5 <10.8	<0.5 <21.5			
02-Mar-05	886,800	<4300	<10.6	<10.6	<10.8	<10.6	<21.5			
15-Apr-05	985,100	<200	4.34	<0.5	<0.5	<0.5	<1.0			
25-Apr-05	1,015,920	<200				allon polishing ve				
02-May-05	1,019,320	<200	<0.5	<0.5	<0.5	<0.5	<1.0			
18-May-05	1,029,270					ed electrical pump	1			
10-May-03	1,002,920	<200	1.24	<0.5	<2.0	<0.5	<1.0			
21-Jun-05	1,126,470	<200 1.24 <0.5 <2.0 <0.5 <1.0 Calibration of flow meter by Aqua Sierra								
21-Juli-05	1,120,470	Campitation of now theter by Aqua oferra								
31-Aug-05	1,283,614	carbon change-out, replaced 2 55-gallon polishing vessels, removed existing 2000 lb carbon vessel, and replaced with newer 2000 lb carbon vessel								
09-Sep-05	1,292,124	<50	<2.0	<0.5	<0.5	<0.5	<0.5			
		_				_				

Notes:

NA- Not analyzed, based on the Sanitary District requirements for MtBE.

< = not detected above laboratory reporting limits.

^{1:} MtBE Confirmed by EPA Method 8260B.

Only effluent sample collected on Jan. 19, Jan. 21, and March 2, 2004

Table 5
Cumulative Mass of Petroleum Hydrocarbons Removed from Groundwater Since
Installation of Treatment System
2185 Solano Way,Concord

Date	Volume	Influent Concentration (μg/L)			Mass Removed (pounds)				
	(gallons)	TPH-g	MtBE *	Benzene	TPH-g	MtBE	Benzene		
2003									
27-Oct-03	190	1,000	40,000	150	0.002	0.06	0.0002		
31-Oct-03	1,860	2,600	15,000	530	0.04	0.27	0.01		
14-Nov-03	4,700	300	26,000	62	0.04	0.89	0.01		
17-Nov-03	13,540	<1,300	22,000	140	0.04	2.51	0.02		
2004									
6-Jan-04	18,500	10,000	15,000	540	0.46	3.13	0.04		
7-Jan-04	25,500	20,000	24,000	1,400	1.62	4.53	0.12		
13-Jan-04	51,000	50,000 Y	22,000	750	12.24	9.20	0.28		
28-Jan-04	106,510	7,100	16,000	530	15.52	16.59	0.53		
3-Feb-04	127,010	11,000	6,200	870	17.40	17.65	0.68		
10-Feb-04	151,300	8,300	35,000	130	19.08	24.73	0.70		
25-Feb-04	203,620	27,000	5,400	940	30.84	27.08	1.11		
9-Mar-04	252,800	12,000	20,000	730	35.75	35.27	1.41		
18-Mar-04	261,300	3,700	37,000	690	36.01	37.89	1.46		
23-Mar-04	276,430	<2500	36,000	<25	36.01	42.42	1.46		
31-Mar-04	280,222	<2500	35,000	170	36.01	43.53	1.47		

Table 5
Cumulative Mass of Petroleum Hydrocarbons Removed from Groundwater Since
Installation of Treatment System
2185 Solano Way,Concord

Date	Volume	Influent Concentration (μg/L)			Mass Removed (pounds)		
	(gallons)	TPH-g	MtBE *	Benzene	TPH-g	MtBE	Benzene
			2004				
5-Apr-04	298,210	2,900	36,000	310	36.45	48.92	1.51
15-Apr-04	328,040	4,300	21,000	670	37.52	54.14	1.68
14-Jun-04	329,170	2,700	NA	470	37.54	NA	1.68
6-Jul-04	355,053	3,500	NA	610	38.30	NA	1.81
4-Aug-04	371,123	3,500	NA	430	38.76	NA	1.87
10-Sep-04	414,343	3,200	11,000	150	39.92	58.09	1.93
8-Oct-04	463,370	4,600	5,100	150	41.79	60.18	1.99
12-Nov-04	549,217	5,633	7,525	339.7	45.82	65.55	2.23
10-Dec-04	620,760	205	416	<4.3	45.94	65.80	2.23
			2005				
7-Jan-05	710,180	9,800	6,200	520	53.24	70.42	2.62
3-Feb-05	778,030	4,200	4,700	70	55.61	73.07	2.66
2-Mar-05	886,800	14,300	1,300	516	68.56	74.25	3.12
15-Apr-05	985,100	<4200	3,630	15	68.56	77.22	3.14
02-May-05	1,029,276	5,510	1640	158	70.59	77.83	3.19
10-Jun-05	1,096,570	6,060	1,480	244	73.98	78.65	3.33
9-Sep-05	1,292,124	16,000	370	350	100.03	79.26	3.90

Notes:

NA- Not analyzed, based on the Sanitary District requirements for MtBE.

Volume is shown as total system discharge. SOMA began discharging treated groundwater to the Central Contra Costa Sanitary District after 329,020 gallons of total flow through system.

< = not detected above laboratory reporting limits.

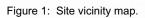
^{*:} MtBE Confirmed by EPA Method 8260B.

Figures

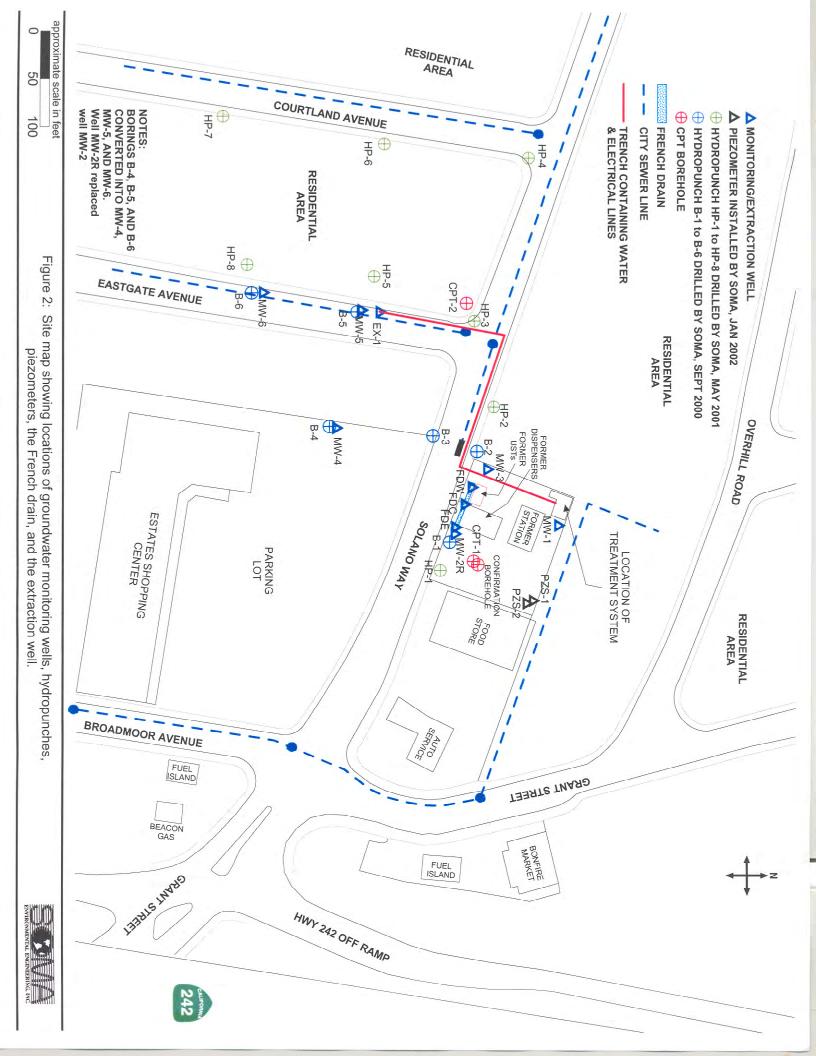


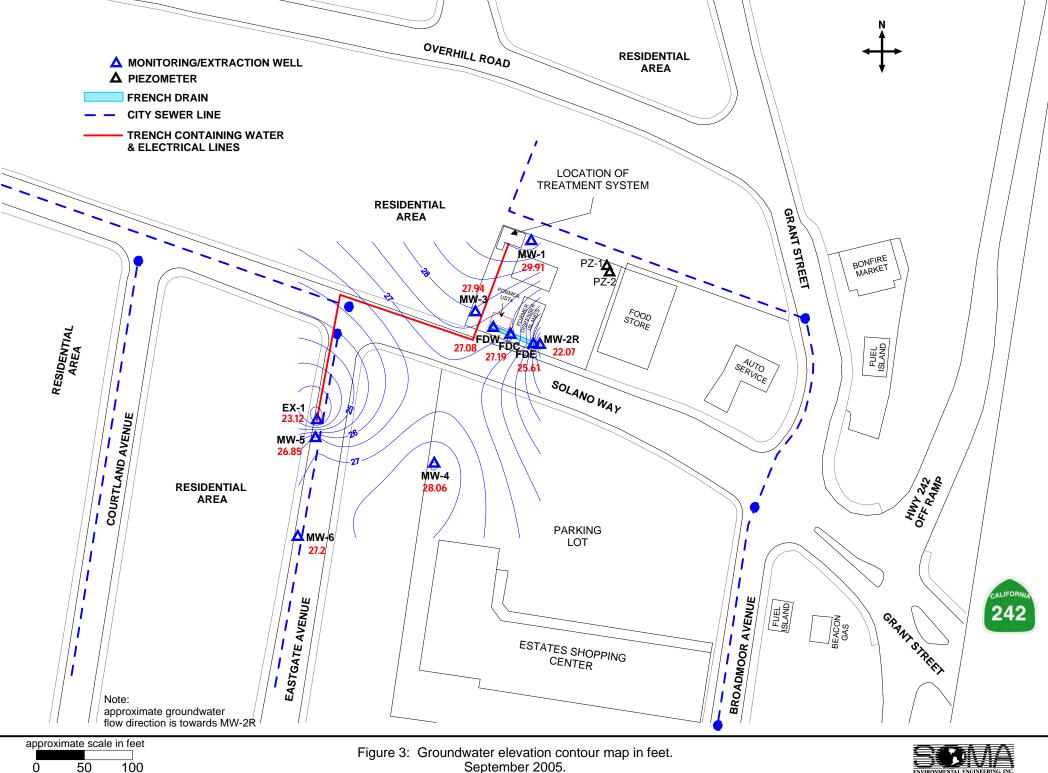


approximate scale in feet









September 2005.



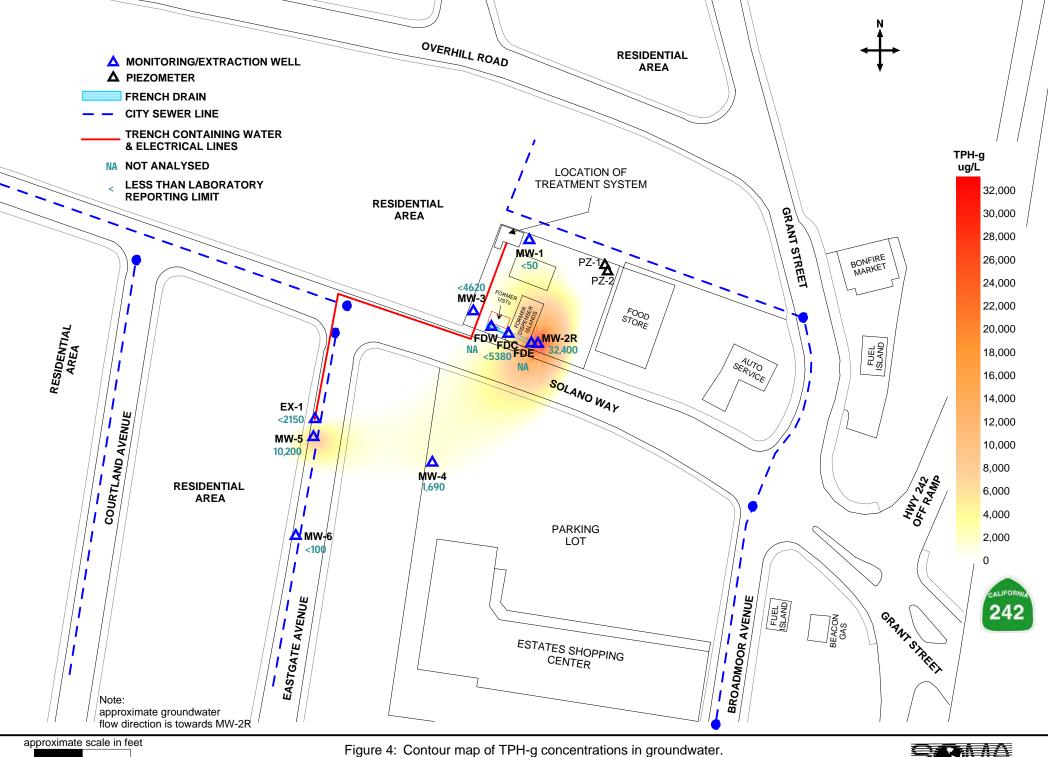


Figure 4: Contour map of TPH-g concentrations in groundwater. September 2005.



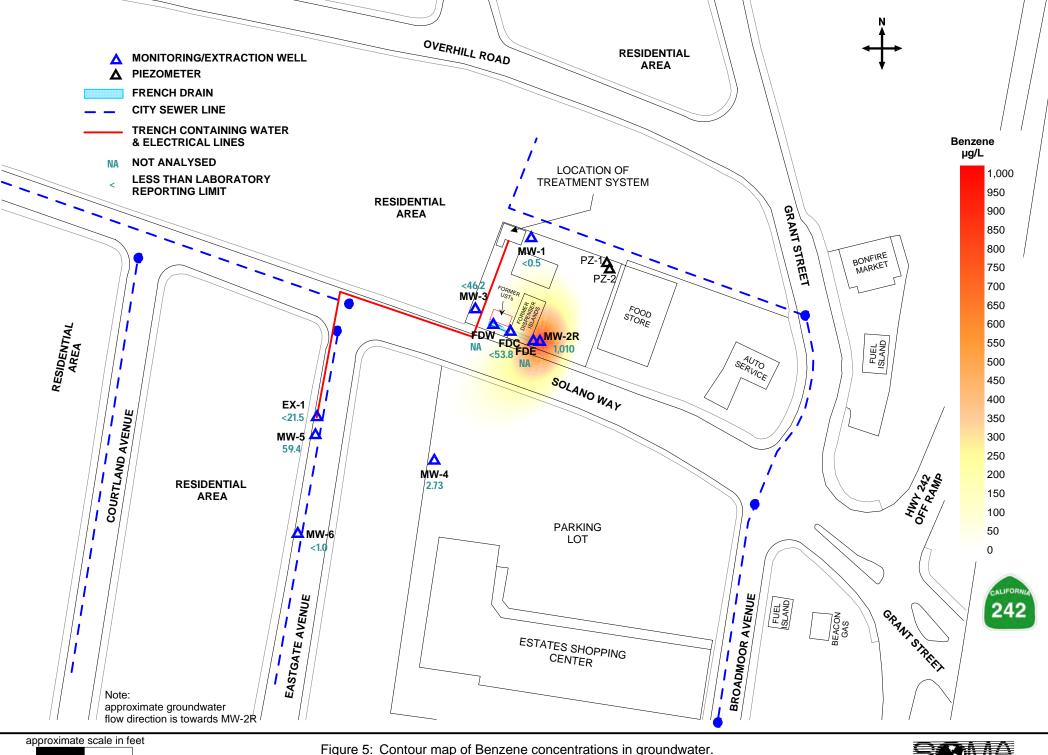


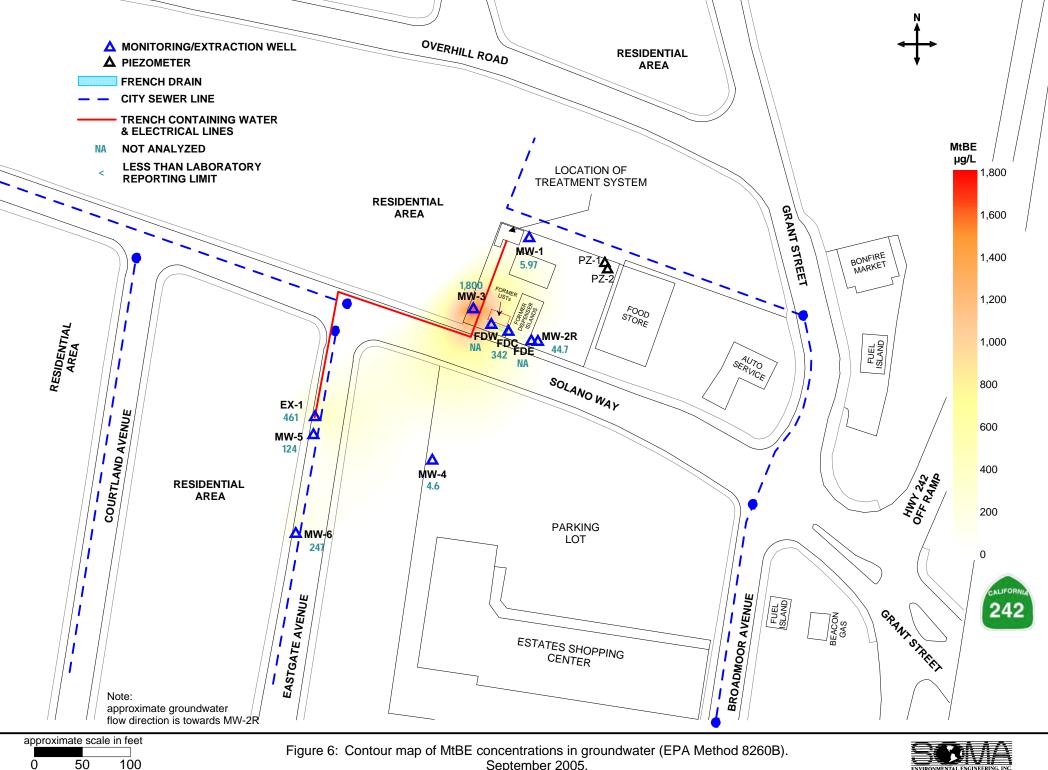
Figure 5: Contour map of Benzene concentrations in groundwater. September 2005.

0

50

100





September 2005.



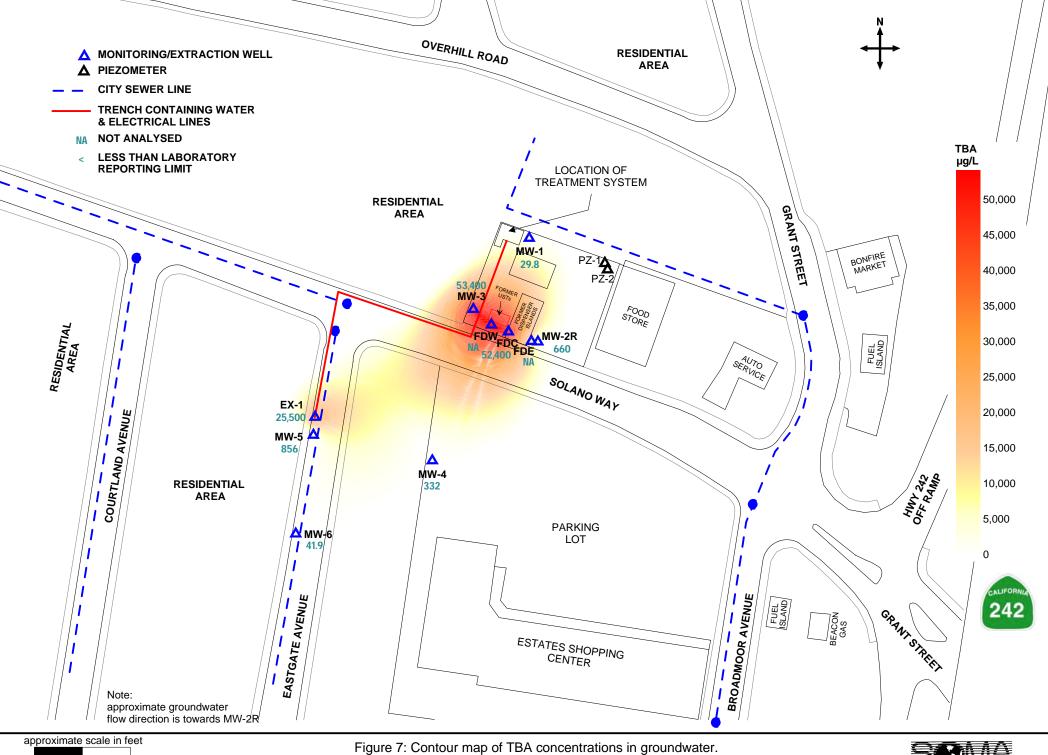
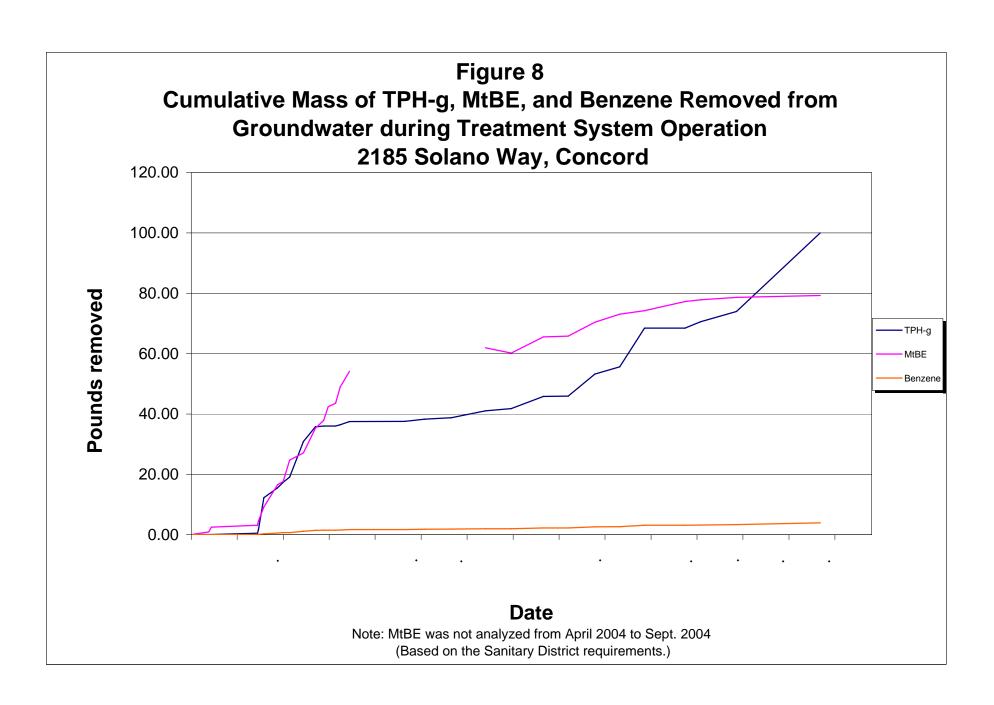


Figure 7: Contour map of TBA concentrations in groundwater. September 2005.





Appendix A



Field Activities

On September 15, 2005, SOMA's field crew conducted a groundwater monitoring event in accordance with the procedures and guidelines of the RWQCB. During this groundwater monitoring event six monitoring wells (on-site wells MW-1 to MW-3, and off-site wells MW-4 to MW-6) were monitored, as well as, the French drain risers. Depths to groundwater were recorded for the French drain risers and the off-site extraction well, EX-1. A grab groundwater sample was collected from the center riser of the French drain and extraction well EX-1. Figure 2 shows the locations of the monitoring wells and French drain risers.

The depth to groundwater in each monitoring well, French drain riser, and the extraction well were measured from the top of each casing to the nearest 0.01-foot using an electric sounder. The top of the casing elevation data and the depth to groundwater in each location was used to calculate the groundwater elevation at different locations.

The top of the casing elevations were based on the survey data measured on July 8, 2003. Kier & Wright Engineers Surveyors, Inc. of Pleasanton, California measured the top of casing elevations on all of the wells. The elevation data was based on a datum of 33.71 feet, NAVD88. The survey data is included in Appendix B. The survey was conducted to comply with EDF requests for electronic reporting of data to the State Water Resources Control Board (SWRCB) Database.

Prior to collecting samples, each well was purged using a battery operated 2-inch diameter pump (Model ES-60 DC).

During the purging activities, in order to obtain accurate measurements of groundwater parameters and especially to avoid the intrusion of oxygen from ambient air into the groundwater samples, field measurements were conducted in-situ (i.e., down-hole inside each monitoring well). The groundwater parameters such as DO, pH, temperature, EC, turbidity, and the ORP were measured in-situ using a Horiba, Model U-22 multi-parameter instrument. The equipment was calibrated at the Site using standard solutions and procedures provided by the manufacturer.

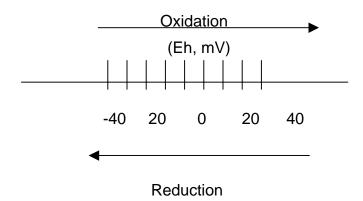
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater conductivity (EC) is directly related to the concentration of ions in solution.

There is a strong correlation between the turbidity level and the biological oxygen demand of natural water bodies. The main purpose for checking the turbidity

level is to provide a general overview of the extent of the suspended solids in the groundwater.

ORP (oxidation reduction potential) is the measure of the potential for an oxidation or reduction process to occur. In the oxidation process a molecule or ion loses one or several electrons. In the reduction process a molecule or ion gains one or several electrons. The unit of the redox potential, is the Volt or m-Volt. The most important redox reaction in petroleum contaminated groundwater is the oxidation of petroleum hydrocarbons in the presence of bacteria and free molecular oxygen. Because the solubility of O₂ in water is low (9 mg/L at 25 °C and 11 mg/L at 5 °C), and because the rate of O₂ replenishment in subsurface environments is limited, DO can be entirely consumed, when the oxidation of only a small amount of petroleum hydrocarbons occurs.

Oxidation of petroleum hydrocarbons can still occur, when all the dissolved O₂ in the groundwater is consumed, however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO₃, MnO₂, Fe (OH)₃, SO₄²⁻ and others (Freeze and Cherry, 1979). As these oxidizing agents are consumed, the groundwater environment becomes more and more reduced. If the process proceeds far enough, the environment may become so strongly reduced that the petroleum hydrocarbons may undergo anaerobic degradation, resulting in the production of methane and carbon dioxide. The concept of oxidation and reduction in terms of changes in oxidation states is illustrated below.



The purging of the wells continued until the parameters for DO, pH, temperature, EC, turbidity, and redox stabilized or three casing volumes were purged.

For sampling purposes, after purging, a disposable polyethylene bailer was used to collect sufficient samples from each monitoring well for laboratory analyses. The groundwater sample was transferred into four 40-mL VOA vials, which had been prepared with HCl preservative. The vials were sealed properly to prevent the development of any air bubbles within the headspace area. After the

groundwater samples were collected, they were placed on ice in a cooler to maintain the samples at 4°C. On September 15, 2005, the samples were accompanied by a chain of custody (COC) form and delivered by SOMA's field crew to Pacific Analytical Laboratory in Alameda, California.

Laboratory Analysis

Pacific Analytical Laboratory, state certified laboratories, analyzed the groundwater samples for total petroleum hydrocarbons as gasoline (TPH-g), benzene, toluene, ethylbenzene, and total xylenes (BTEX), Methyl tertiary Butyl Ether (MtBE), gasoline oxygenates, and lead scavengers. TPH-g, BTEX, MtBE, gasoline oxygenates, and lead scavengers were all prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

Appendix B

Table of Elevations & Coordinates on Monitoring Wells Measured by Kier Wright Civil Engineers Surveyors, Inc.

and

Field Measurements of Biodegradation Parameters & Physical and Chemical Properties of Groundwater Samples Collected During the Third Quarter 2005

DATE: 7/08/03 JOB# A02576-4

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL 2185 SOLANO WAY, CONCORD

WELL ID	NORTHING (FT.)/	EASTING (FT.) /		
#	LATITUDE (D.M.S.)	LONGITUDE (D.M.S.)	ELEVATION (FT.)	
EX-1	2186488.06	6116997.91	37.58	TOP 6" PVC, FELT ARROW N. SIDE
	N 37°59'22.78774"	W 122°02'35.02008"	37.46	RIM/FLUSH /W AC
FDC	2186577.28	6117215.79	41.29	TOP 4" PVC, PAINT DOT N. SIDE
100	N 37°59'23.70515"	W 122°02'32.31711"	40.94	RIM, PUNCH N. SIDE
	11 37 39 23.70313	VV 122 02 02.31711	40.54	GRAVEL
FDE	2186567.29	6117239.59	40.21	TOP 4" PVC, PAINT DOT N. SIDE
LDE .	N 37°59'23.61032"	W 122°02'32.01773"	41.05	RIM, PUNCH N. SIDE
	N 37 59 23.61032	VV 122 02 32.01773		,
			40.58	GRAVEL
FDW	2186584.35	6117198.00	40.18	TOP 4" PVC, PAINT DOT N. SIDE
	N 37°59'23.77219"	W 122°02'32.54076	40.84	RIM, PUNCH N. SIDE
			40.51	GRAVEL
MW-1	2186674.84	6117237.26	40.78	TOP 2" PVC, NOTCH N. SIDE
10100	N 37°59'24.67303"	W 122°02'32.06903"	41.03	RIM, PUNCH N. SIDE
	14 07 00 24:07 000	VV 122 02 02.00000	41.02	AC
MW OD	2186566.70	6117246.21	40.05	TOD 3" DVC NOTCLINI CIDE
MW-2R			40.85	TOP 2" PVC, NOTCH N. SIDE
	N 37°59'23.60555"	W 122°02'31.93486"	41.13	RIM, PUNCH N. SIDE
			40.85	GRAVEL
MW-3	2186600.54	6117178.94	40.29	TOP 2" PVC, NOTCH N. SIDE
	N 37°59'23.92909"	W 122°02'32.78214"		NO BOX
			40.52	DIRT
MW-4	2186444.59	6117123.20	39.56	TOP 2" PVC, NOTCH N. SIDE
	N 37°59'22.37842"	W 122°02'33.44620"	39.81	RIM, PUNCH N. SIDE
	14 07 00 22:07 0 12	VV 122 02 00:11020	40.09	AC
MW-5	2186469.33	6116994.39	38.14	TOP 2" PVC, NOTCH N. SIDE
C-VVIVI				•
	N 37°59'22.60202"	W 122°02'35.06022"	38.39	RIM, PUNCH N. SIDE
			38.40	AC
MW-6	2186366.54	6116974.04	37.85	TOP 2" PVC, NOTCH N. SIDE
	N 37°59'21.5826"	W 122°02'35.29311"	38.15	RIM/FLUSH /W AC

ADDITIONAL POINTS

PT#	NORTHING (FT.)	EASTING (FT.)	ELEVATION (FT.)	DESCRIPTION
45	2186637.27	6117216.27	N/A	BL<

Kier & Wright Engineers Surveyors, Inc.

DATE: 7/08/03 JOB# A02576-4

TABLE OF ELEVATIONS & COORDINATES ON MONITORING WELLS

SOMA ENVIRONMENTAL 2185 SOLANO WAY, CONCORD

46	2186622.14	6117255.86	N/A	BL<
47	2186646.63	6117265.13	N/A	BL<
33	2186578.43	6117165.64	39.15	TC DWY
34	2186567.19	6117194.76	39.45	TC DWY
35	2186542.61	6117258.10	39.87	TC DWY
36	2186531.23	6117287.30	40.03	TC DWY
42	2186571.14	6117211.90	N/A	CANOPY <
43	2186562.21	6117234.13	N/A	CANOPY <
44	2186608.15	6117252.56	N/A	CANOPY <

BENCH MARK: NGS Bench mark No.BM 3137

From the intersection of I-680 and Concord Ave. in Concord, go east on Concord Ave. 0.85 miles to a bridge over Walnut Creek and the station on the left. Station is at the east end of the bridge, on the north side of Concord Ave. station is 26 feet west of the east end of the bridge and 1.3 feet north of the north edge of pavement of Concord Ave. Monument is 2.5" brass disk set flush in the concrete and stamped "Contra Costa County Benchmark 3137".

Elevation =33.71 NAVD88 Datum

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.



Well No.:	Mu	<u>ر</u>		Project No.:	2461
Casing Diameter:	_ 2	inch		Address:	2185 Solano Way
Depth of Well:	20.6	<u>5</u> ft			Concord, CA
Top of Casing Elevation:	40.7	<u>''</u> ft		Date:	September 15, 2005
Depth to Groundwater:	10.8	<u>7_</u> ft		Sampler:	Mehran Nowroozi
Groundwater Elevation:	29.9	↓ ft			John Lohman
Water Column Height:	9:70	<u>₹</u> ft			
Purged Volume:	1/2	gallons			
Purging Method:	Bailer			Pump 🔀	,
Sampling Method:	Bailer	PET"		Pump □	
	,				
Color:	No	F	Yes	□ <u>Describe</u>	
Sheen:	No	ø	Yes	□ Describe	
Odor:	No		Yes	Describe	petvo)

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
12:51 Pm	STX	DRT	VI	RBE						
12:55 Pm	7	3.11	7.01	20.51	1560	612	-152			
1:00PM	6	1.89	C-93	20.18	1580	466	-159			
103em	9	157	6.95	20.12	1590		-284			
1000 pm	12	1,36	6.93	2007	1590	37	-307			
1:10 pm	SA	MF	PULL	b				0	6.5	80
								-0		



i
l
_

Time	Volume (gallons)	D.O. mg/L	pН	Temp °C	E.C. (μS/cm)	Turb. NTU	ORP	Fe ⁺² mg/L	NO ₃ mg/L	SO ₄ -² mg/L
2:05 PM	SP	m	PLE	5						

Notes:

not enough water, just enough for cample

to silty to obtain accurate measurements for terrous ivon



Well No.:	MU	\ 3		P	Project No.: 2461
Casing Diameter:		inch			Address: 2185 Solano Way
Depth of Well:	<u> 20 .</u>	<u>70</u> ft			Concord, CA
Top of Casing Elevation:	40.2	ft ft			Date: September 15, 2005
Depth to Groundwater:	12.3	<u>5</u> ft			Sampler: Mehran Nowroozi
Groundwater Elevation:	27.9	<u>4</u> ft			John Lohman
Water Column Height:	5.3	<u>5</u> ft .			
Purged Volume:	_9	gallons			
Purging Method:	Bailer				Pump 5
33					
Sampling Method:	Bailer	<u> </u>			Pump □
Color:	No	J	Yes		Describe
Sheen:	No	Ç 3k-	Yes		Describe
Odor:	No	p g	Yes		Describe

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
1:24 PM	ATA	27/	nroc	_		.,				
1.27 PM	3	3.13	6.51	20 54	14712	661	-116			
1-31 PM	(0	1,99	C. 18	20 58	1440	636	-137			
1:35 pm	9	1.51	6.79	70.50	1470	576	-142			
1:34 Pm	SAI	noL	E5					.71	0	21



	lika s	U		_		2/2/
Well No.:	mw			P	roject No.:	2461
Casing Diameter:		inch			Address:	2185 Solano Way
Depth of Well:	21.0	<u>3</u> ft				Concord, CA
Top of Casing Elevation:	345	6 ft			Date:	September 15, 2005
Depth to Groundwater:	11.5	<u>⊘</u> ft			Sampler:	Mehran Nowroozi
Groundwater Elevation:	28.C					John Lohman
Water Column Height:	9.3	3 ft				
Purged Volume:	_17	gallons				
Purging Method:	Bailer	. 🗆			Pump PS	
Sampling Method:	Baile	· ` \\$\\#\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			Pump	
oumping memou.	Dane				·	
Color:	No	火	Yes		Describe	
Sheen:	No	, , ⊈∷	Yes		Describe	
		Y,		-		
Odor:	No	A	Yes		Describe	
		1				

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(galions)	mg/L		ိုင	(μS/cm)	NTU		mg/L	mg/L	mg/L
17:10 Pm	57V	RI	rue	OF.						
12:13 PM	3	3:34	6.70	24.29	1480	392	-60			
17:70 PM	8	2.44	6.105	24.69	1470	400	-95			
12:26 PM	12	214	6.68	24.04	1450	388	-104			
12:30 pm	SAV	~ pL	5					2.0	ð	6
		•								
	- Addition		·							



Well No.:	MWS		Project No.: 2461
Casing Diameter:	inch		Address: 2185 Solano Way
Depth of Well:	20.90 ft		Concord, CA
Top of Casing Elevation:	38.14 ft		Date: September 15, 2005
Depth to Groundwater:	11.29 ft		Sampler: Mehran Nowroozi
Groundwater Elevation: Z	<u>. 6.55</u> tt		John Lohman
Water Column Height:	1.61 ft		
Purged Volume:	gallons		
5 · • • · ·	Deller D		Duran Car
Purging Method:	Bailer 🗆		Pump 🞾
Sampling Method:	Bailer 🕿		Pump □
Color:	No □	Yes	Describe Whitish
Sheen:	No 💆	Yes	□ Describe
+	<i>/</i>		CASA A CAMA
Odor:	No 🗆	Yes	Describe Signification of the second of the

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ ⁻²
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
10:44	GTP	RIT	PURC	56						
10:47	M	3.66	6,69	21.15	1500	999	153			
0:50	6	7.59	6.63	21.10	1500	999	-75			
10:55	9	2.17	6,63	21,06	1450	999	745			
11:00 Am	SA	Mp	IFS					094	ව	0
			,							



Well No.:	MW	o O		P	Project No.: 2461
Casing Diameter:	2	- inch			Address: 2185 Solano Way
Depth of Well:	20,7	ft			Concord, CA
Top of Casing Elevation:	31.5	<u>5</u> ft			Date: September 15, 2005
Depth to Groundwater:	10.6	₹ ft			Sampler: Mehran Nowroozi
Groundwater Elevation:	2 <u>7.7.</u>	<u>o</u> ft			John Lohman
Water Column Height:	10,0	<u>5</u> ft			
Purged Volume:	17	gallons			
Purging Method:	Bailer				Pump S
Sampling Method:	Bailer	Ø			Pump □
Color:	No	p €	Yes		Describe
Sheen:	No	Æ	Yes		Describe
Odor:	No	P.	Yes		Describe

Time	Volume	D.O.	pН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
10:10 pm	STA	cts	Cr RG) <u></u>						
10:12 Am	3	6.04	7.36	22.09	1350	457	149			
10:15 Am	6	4.21	6.93	21.94	1350	387	150			
10:18 Am	9	3 46	6.76	21.62	1340	392	149			
10 21 Am	ルシ	308	6.71	21,67	1350	411	149			
10.73Am	Sr	m i	015	5				.77	0	16
										•



Well No.:	上〉	<u> </u>		Р	roject No.: 2461
Casing Diameter:		inch			Address: 2185 Solano Way
Depth of Well:		ft			Concord, CA
Top of Casing Elevation:	37.5	<u>S</u> ft			Date: September 15, 2005
Depth to Groundwater:	4.4	6 ft			Sampler: Mehran Nowroozi
Groundwater Elevation:	231	<u>Z</u> ft			John Lohman
Water Column Height:		ft			
Purged Volume:		gallons			
Purging Method: Sampling Method:	Bailer Bailer				Pump 10 t puryeo Pump 10
Color:	No		Yes		Describe
Sheen:	No		Yes		Describe
Odor:	No		Yes		Describe

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
11:20 Am	SA	mp	LES					,32	. 0	Ŋ



Well No.:	ED	<u>C</u>		P	roject No.: 2461
Casing Diameter:		inch			Address: 2185 Solano Way
Depth of Well:		ft			Concord, CA
Top of Casing Elevation:	41.2	.9_ft			Date: September 15, 2005
Depth to Groundwater:	14.	<u>l o</u> ft			Sampler: Mehran Nowroozi
Groundwater Elevation:	27.1	9 ft			John Lohman
Water Column Height:		ft			
Purged Volume:		gallons			
Purging Method: Sampling Method:	Bailer Bailer				Pump - not purges
Color:	No		Yes		Describe
Sheen:	No		Yes		Describe
Odor:	No		Yes		Describe

Time	Volume	D.O.	рН	Temp	E.C.	Turb.	ORP	Fe ⁺²	NO ₃	SO ₄ -2
	(gallons)	mg/L		°C	(μS/cm)	NTU		mg/L	mg/L	mg/L
2:35 pm	SAU	nph	F5					3.30	C	50
	A									
	12. The state of t									
		1								
				,.						

Appendix C

Laboratory Report and Chain Of Custody Form for the
Third Quarter 2005 Monitoring Event

21 September 2005

Mansour Sepehr SOMA Environmental Engineering Inc. 6620 Owens Drive, Suite A Pleasanton, CA 94588

RE: 2185 Solano Way

Work Order Number: 5090007

Mapa Ach

This Laboratory report has been reviewed for technical correctness and completeness. This entire report was reviewed and approved by the Laboratory Director or the Director's designee, as verified by the following signature.

Sincerely,

Maiid Akhavan

Laboratory Director

CHAIN OF CUSTODY FORM

Page ____ of_____

PAL Pacific Analytical Laboratory 851 West Midway Ave., Suite 201B Alameda, CA 94501 510-864-0364 Telephone 510-864-0365 Fax

PAL Login# 5090007

Proje	ect No: 2461			Sar	nple	r:	John Lohm	an / "E	ric J	lenni	ings A	reuvan	Nowson		Analy	/ses/N	Method	
Proje	ect Name: 2185 S	olano Way,	Concord	Rej	port	To:	Joyce Bobe	ek						80B	ates			
Proje	ect P.O.:			Co	mpa	any:	SOMA En	viror	ımeı	ntal	Engin	eering, Inc.		826	gen			
Turn	around Time: S	tandard		Tel Far		-	244-6600 244-6601 # of							TPHg, BTEX 8260B	Gasoline Oxygenates Pb Scavengers			
		Sampling	Date/Time	M	latri	X	Containers	1	Prese	rvati	ves			TP	Gas			
Lab No.	Sample ID	Date	Time	Soil	Water	Waste		HCL	H ₂ So4	HNO ₃	ICE	F	eld Notes					
	MW-1	9/15/05	-1:100m		Х		U \$ VOAs	X			Х	Gra	b Sample	X	Х			
	MW-2R	1,15/01	2:05 pm		X		1 5 VOAs	X			X	Gra	b Sample	X	X			
I III, U.S.	MW-3		1:36 pm		X		\$ VOAs	X			Х	Gra	b Sample	X	X			
	MW-4		12:50 pm		X		\$ VOAs	X			Х	Gra	b Sample	X	X			
Lange Land	MW-5		11:00 AM		X		5 VOAs	X			X	Gra	b Sample	X	X			
	MW-6		10:23 Am		X		5 VOAs	X			X		b Sample	X	X			
	FDC		2:35 PM		X		5 VOAs	Х			х		b Sample	X	X			
	EX-1	-	11:20 Am		X		V 5 VOAs	X			X	Gra	ab Sample	X	X			
Sam	pler Remarks:						Relinquis	hed	by:		Date	Time:	Received by:			Da	te/Time	
Etha		OUTPUT REC	QUIRED				M		2		9/10	5105 00PM	Received by:	~~	jv .	9	4:00	pm
									-								(



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	5090007-01	Water	15-Sep-05 13:10	15-Sep-05 16:12
MW-2R	5090007-02	Water	15-Sep-05 14:05	15-Sep-05 16:12
MW-3	5090007-03	Water	15-Sep-05 13:38	15-Sep-05 16:12
MW-4	5090007-04	Water	15-Sep-05 12:30	15-Sep-05 16:12
MW-5	5090007-05	Water	15-Sep-05 11:00	15-Sep-05 16:12
MW-6	5090007-06	Water	15-Sep-05 10:23	15-Sep-05 16:12
FDC	5090007-07	Water	15-Sep-05 14:35	15-Sep-05 16:12
EX-1	5090007-08	Water	15-Sep-05 11:20	15-Sep-05 16:12



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B Pacific Analytical Laboratory

					-				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
MW-1 (5090007-01) Water Samp	eled: 15-Sep-05 13:10 Recei	ived: 15-Sep-0	5 16:12						
Gasoline (C6-C12)	ND	50.0	ug/l	1	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Benzene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	5.97	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	29.8	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		80.2 %	70-	-130	"	"	"	"	
Surrogate: Dibromofluoromethane		113 %		-130	"	"	"	"	
Surrogate: Perdeuterotoluene		96.4 %	70-	-130	"	"	"	"	
MW-2R (5090007-02RE1) Water	Sampled: 15-Sep-05 14:05	Received: 15	-Sep-05 10	5:12					
Gasoline (C6-C12)	32400	1080	ug/l	21.5	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Benzene	1010	10.8	"	"	"	,	,,	"	
Ethylbenzene	1230	10.8	"	"	"	"	"	"	
m&p-Xylene	2390	21.5	"	"	"	"	"	"	
o-xylene	1660	10.8	"	"	"	"	"	"	
Toluene	3110	43.0	"	"	"	"	"	"	
MTBE	44.7	10.8	"	"	"	"	"	"	
DIPE	ND	10.8	"	"	"	"	"	"	
ETBE	ND	10.8	"	"	"	"	"	"	
TAME	ND	43.0	"	"	"	"	"	"	
TBA	660	215	"	"	"	"	"	"	
1,2-dichloroethane	ND	10.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	10.8	"	"	"	"	"	"	
Ethanol	ND	21500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		102 %	70-	-130	"	"	"	"	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-2R (5090007-02RE1) Water S	Sampled: 15-Sep-05 14:05	Received: 15-	-Sep-05 10	5:12					
Surrogate: Dibromofluoromethane		101 %	70-	130	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Surrogate: Perdeuterotoluene		97.4 %	70-	130	"	"	"	"	
MW-3 (5090007-03RE2) Water Sa	mpled: 15-Sep-05 13:38 I	Received: 15-S	ep-05 16:	12					
Gasoline (C6-C12)	ND	4620	ug/l	92.5	BI51901	15-Sep-05	19-Sep-05	EPA 8260B	
Benzene	ND	46.2	"	"	"	"	"	"	
Ethylbenzene	ND	46.2	"	"	"	"	"	"	
m&p-Xylene	ND	92.5	"	"	"	"	"	"	
o-xylene	ND	46.2	"	"	"	"	"	"	
Toluene	ND	185	"	"	"	"	"	"	
MTBE	1800	46.2	"	"	"	"	"	"	
DIPE	ND	46.2	"	"	"	"	"	"	
ETBE	ND	46.2	"	"	"	"	"	"	
TAME	ND	185	"	"	"	"	"	"	
TBA	53400	925	"	"	"	"	"	"	
1,2-dichloroethane	ND	46.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	46.2	"	"	"	"	"	"	
Ethanol	ND	92500	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.8 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		108 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		95.0 %	70-	130	"	"	"	"	
MW-4 (5090007-04) Water Sample	ed: 15-Sep-05 12:30 Recei	ved: 15-Sep-0:	5 16:12						
Gasoline (C6-C12)	1690	50.0	ug/l	1	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Benzene	2.73	0.500	"	"	"	"	"	"	
Ethylbenzene	1.88	0.500	"	"	"	"	"	"	
m&p-Xylene	ND	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	2.00	"	"	"	"	"	"	
MTBE	4.60	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
TAME	ND	2.00	"	"	"	"	"	"	
TBA	332	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Not
MW-4 (5090007-04) Water Sampled: 15-S				Dilution	Daten	терагси	7 mary 200	Memou	1101
	50p-03 12.30 Recei			120	DISTORT	15.0 05	16.6. 05	ED 4 0240D	
Surrogate: 4-Bromofluorobenzene		86.8 % 97.8 %		130 130	BI51901 "	15-Sep-05 "	16-Sep-05 "	EPA 8260B	
Surrogate: Dibromofluoromethane					,,	,,	,,	"	
Surrogate: Perdeuterotoluene		98.6 %	70	130		,,	,,		
MW-5 (5090007-05RE1) Water Sampled:	15-Sep-05 11:00 F	Received: 15-S	ep-05 16:1	2					
Gasoline (C6-C12)	10200	50.0	ug/l	1	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Benzene	59.4	0.500	"	"	"	"	"	"	
Ethylbenzene	14.4	0.500	"	"	"	"	"	"	
m&p-Xylene	3.43	1.00	"	"	"	"	"	"	
o-xylene	ND	0.500	"	"	"	"	"	"	
Toluene	4.34	2.00	"	"	"	"	"	"	
MTBE	124	0.500	"	"	"	"	"	"	
DIPE	ND	0.500	"	"	"	"	"	"	
ETBE	ND	0.500	"	"	"	"	"	"	
ГАМЕ	ND	2.00	"	"	"	"	"	"	
ГВА	856	10.0	"	"	"	"	"	"	
1,2-dichloroethane	ND	0.500	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.500	"	"	"	"	"	"	
Ethanol	ND	1000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		101 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		91.8 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		105 %	70-	130	"	"	"	"	
MW-6 (5090007-06) Water Sampled: 15-S	Sep-05 10:23 Recei	ved: 15-Sep-0	5 16:12						
Gasoline (C6-C12)	ND	100	ug/l	2	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
,			"	"	,,	,,	,,	"	
Benzene	ND	1.00							
	ND ND	1.00 1.00	"	"	"	"	"	"	
Ethylbenzene						"	"	"	
Ethylbenzene m&p-Xylene	ND	1.00	"	"	"				
Ethylbenzene m&p-Xylene o-xylene	ND ND	1.00 2.00	"	"	"	"	"	"	
Ethylbenzene m&p-Xylene o-xylene Foluene	ND ND ND	1.00 2.00 1.00	"	" "	"	"	"	"	
Ethylbenzene m&p-Xylene o-xylene Toluene MTBE	ND ND ND ND	1.00 2.00 1.00 4.00	" "	" "	""	" "	" "	" " "	
Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE	ND ND ND ND 247	1.00 2.00 1.00 4.00 1.00	" " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " "	" " " "	11 11 11	
Ethylbenzene m&p-Xylene p-xylene Foluene MTBE DIPE ETBE	ND ND ND ND 247 ND ND	1.00 2.00 1.00 4.00 1.00 1.00	" " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " "	" " " "	11 11 11	
Ethylbenzene m&p-Xylene o-xylene Foluene MTBE DIPE ETBE FAME	ND ND ND ND ND 247 ND ND ND	1.00 2.00 1.00 4.00 1.00 1.00 1.00 4.00	" " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11 11	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11	
Benzene Ethylbenzene m&p-Xylene o-xylene Toluene MTBE DIPE ETBE TAME TBA	ND ND ND ND 247 ND ND	1.00 2.00 1.00 4.00 1.00 1.00	" " " " " " " " "		" " " " " " " "	" " " " " " " " " " " " " " " " " " " "	" " " " " " " " " " " " " " " " " " " "	11 11 11 11	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

	D. k	Reporting	TT :	Dil e	D ()	D 1		M. d. d.	NI ·
Analyte	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
MW-6 (5090007-06) Water Sampled: 15-Sep	-05 10:23 Recei	ived: 15-Sep-0	5 16:12						
Ethanol	ND	2000	ug/l	2	BI51901	15-Sep-05	16-Sep-05	EPA 8260B	
Surrogate: 4-Bromofluorobenzene		83.8 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		107 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		94.0 %	70-	130	"	"	"	"	
FDC (5090007-07RE3) Water Sampled: 15-S	ep-05 14:35 Re	ceived: 15-Sep	o-05 16:12						
Gasoline (C6-C12)	ND	5380	ug/l	107.5	BI51901	15-Sep-05	20-Sep-05	EPA 8260B	
Benzene	ND	53.8	"	"	"	"	"	"	
Ethylbenzene	ND	53.8	"	"	"	"	"	"	
m&p-Xylene	ND	108	"	"	"	"	"	"	
o-xylene	ND	53.8	"	"	"	"	"	"	
Toluene	ND	215	"	"	"	"	"	"	
MTBE	342	53.8	"	"	"	"	"	"	
DIPE	ND	53.8	"	"	"	"	"	"	
ETBE	ND	53.8	"	"	"	"	"	"	
TAME	ND	215	"	"	"	"	"	"	
TBA	52400	1080	"	"	"	"	"	"	
1,2-dichloroethane	ND	53.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	53.8	"	"	"	"	"	"	
Ethanol	ND	108000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		82.6 %	70-	130	"	"	"	"	
Surrogate: Dibromofluoromethane		110 %	70-	130	"	"	"	"	
Surrogate: Perdeuterotoluene		96.0 %	70-	130	"	"	"	"	
EX-1 (5090007-08RE2) Water Sampled: 15-8	Sep-05 11:20 R	eceived: 15-Se	p-05 16:12	1					
Gasoline (C6-C12)	ND	2150	ug/l	43	BI51901	15-Sep-05	19-Sep-05	EPA 8260B	
Benzene	ND	21.5	"	"	"	"	"	"	
Ethylbenzene	ND	21.5	"	"	"	"	"	"	
m&p-Xylene	ND	43.0	"	"	"	"	"	"	
o-xylene	ND	21.5	"	"	"	"	"	"	
Toluene	ND	86.0	"	"	"	"	"	"	
MTBE	461	21.5	"	"	"	"	"	"	
DIPE	ND	21.5	"	"	"	"	"	"	
ETBE	ND	21.5	"	"	"	"	"	"	
TAME	ND	86.0	"	"	"	"	"	"	
TBA	25500	430	"	"	"	"	"	"	
1,2-dichloroethane	ND	21.5	"	"	"	,,	,,	"	

Pacific Analytical Laboratory



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B

Pacific Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
EX-1 (5090007-08RE2) Water S	ampled: 15-Sep-05 11:20	Received: 15-Se	p-05 16:12						
1,2-Dibromoethane (EDB)	ND	21.5	ug/l	43	BI51901	15-Sep-05	19-Sep-05	EPA 8260B	
Ethanol	ND	43000	"	"	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		81.4 %	70-13	80	"	"	"	"	
Surrogate: Dibromofluoromethane		110 %	70-13	80	"	"	"	"	
Surrogate: Perdeuterotoluene		96.0 %	70-13	80	"	"	"	"	



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BI51901 - EPA 5030 Water MS

Blank (BI51901-BLK1)				Prepared & Ana	lyzed: 19-Sep-05		
Surrogate: 4-Bromofluorobenzene	42.5		ug/l	50.0	85.0	70-130	
Surrogate: Dibromofluoromethane	52.1		"	50.0	104	70-130	
Surrogate: Perdeuterotoluene	47.4		"	50.0	94.8	70-130	
MTBE	ND	0.500	"				
DIPE	ND	0.500	"				
ETBE	ND	0.500	"				
TAME	ND	2.00	"				
Gasoline (C6-C12)	ND	50.0	"				
TBA	ND	10.0	"				
1,2-dichloroethane	ND	0.500	"				
1,2-Dibromoethane (EDB)	ND	0.500	"				
Ethanol	ND	1000	"				
Benzene	ND	0.500	"				
Ethylbenzene	ND	0.500	"				
m&p-Xylene	ND	1.00	"				
o-xylene	ND	0.500	"				
Toluene	ND	2.00	"				
LCS (BI51901-BS1)				Prepared & Ana	lyzed: 19-Sep-05		
Surrogate: 4-Bromofluorobenzene	46.3		ug/l	50.0	92.6	70-130	
Surrogate: Dibromofluoromethane	49.0		"	50.0	98.0	70-130	
Surrogate: Perdeuterotoluene	45.1		"	50.0	90.2	70-130	
MTBE	118	0.500	"	100	118	70-130	
ETBE	123	0.500	"	100	123	70-130	
ТАМЕ	113	2.00	"	100	113	70-130	
Gasoline (C6-C12)	1950	50.0	"	2000	97.5	70-130	
TBA	583	10.0	"	500	117	70-130	
Benzene	106	0.500	"	100	106	70-130	
Toluene	111	2.00	"	100	111	70-130	



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Pacific Analytical Laboratory

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch BI51901 - EPA 5030 Water MS

LCS Dup (BI51901-BSD1)	Prepared & Analyzed: 19-Sep-05								
Surrogate: 4-Bromofluorobenzene	47.7		ug/l	50.0	95.4	70-130			
Surrogate: Dibromofluoromethane	49.6		"	50.0	99.2	70-130			
Surrogate: Perdeuterotoluene	44.1		"	50.0	88.2	70-130			
MTBE	116	0.500	"	100	116	70-130	1.71	20	
ETBE	116	0.500	"	100	116	70-130	5.86	20	
TAME	108	2.00	"	100	108	70-130	4.52	20	
TBA	583	10.0	"	500	117	70-130	0.00	20	
Gasoline (C6-C12)	1640	50.0	"	2000	82.0	70-130	17.3	20	
Benzene	106	0.500	"	100	106	70-130	0.00	20	
Toluene	111	2.00	"	100	111	70-130	0.00	20	



6620 Owens Drive, Suite AProject Number: 2461Reported:Pleasanton CA, 94588Project Manager: Mansour Sepehr21-Sep-05 10:16

Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference

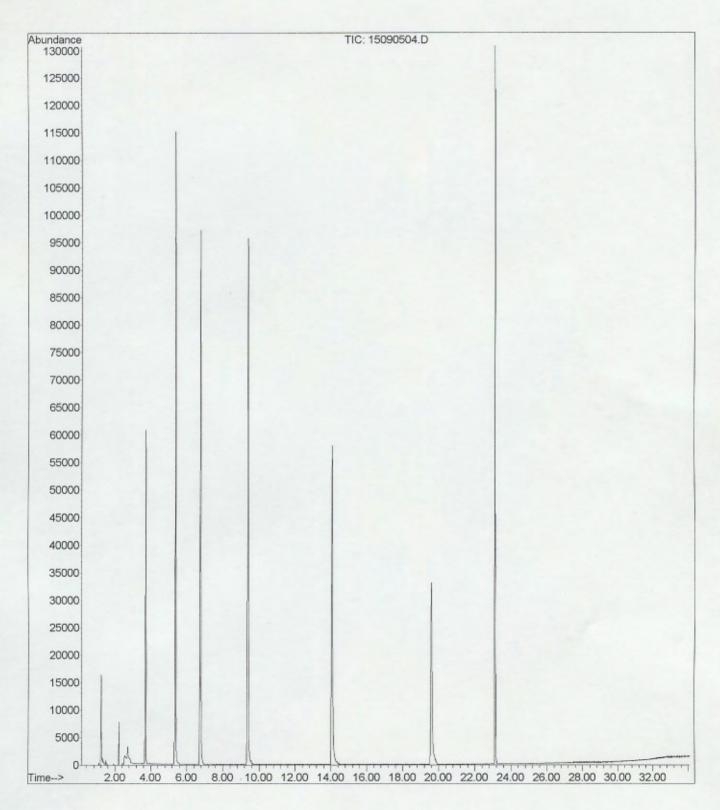
File :C:\MSDChem\1\DATA\2005-Sep-15-0948.b\15090504.D

Operator :

Acquired : 15 Sep 2005 3:29 pm using AcqMethod VOCOXY.M

Instrument : PAL GCMS Sample Name: BI51901-BLK1

Misc Info : Vial Number: 4



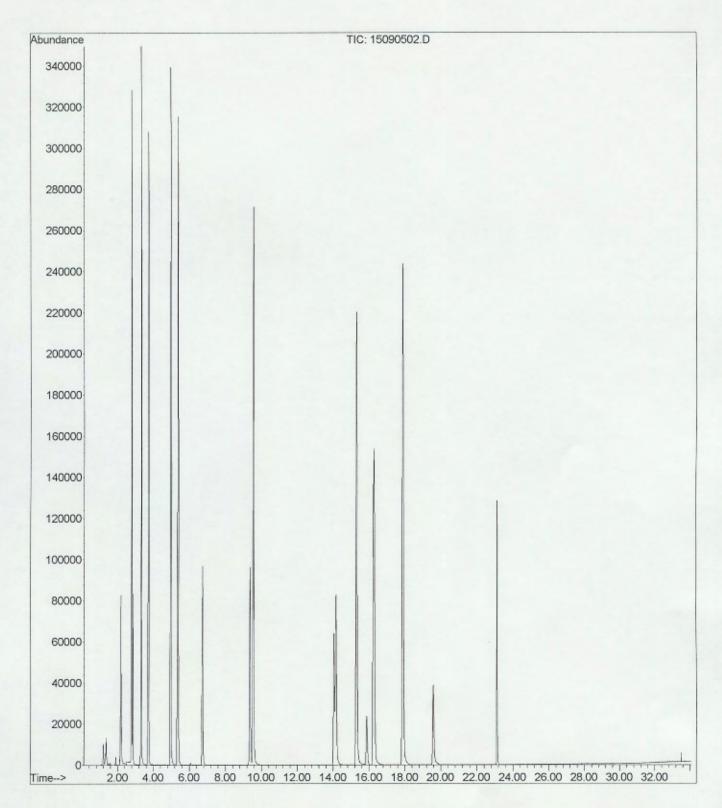
File :C:\MSDChem\1\DATA\2005-Sep-15-0948.b\15090502.D

Operator : Acquired : 15 Sep 2005 1:55 pm using AcqMethod VOCOXY.M

Instrument : PAL GCMS

Sample Name: BI51901-BS1@voc

Misc Info : Vial Number: 2



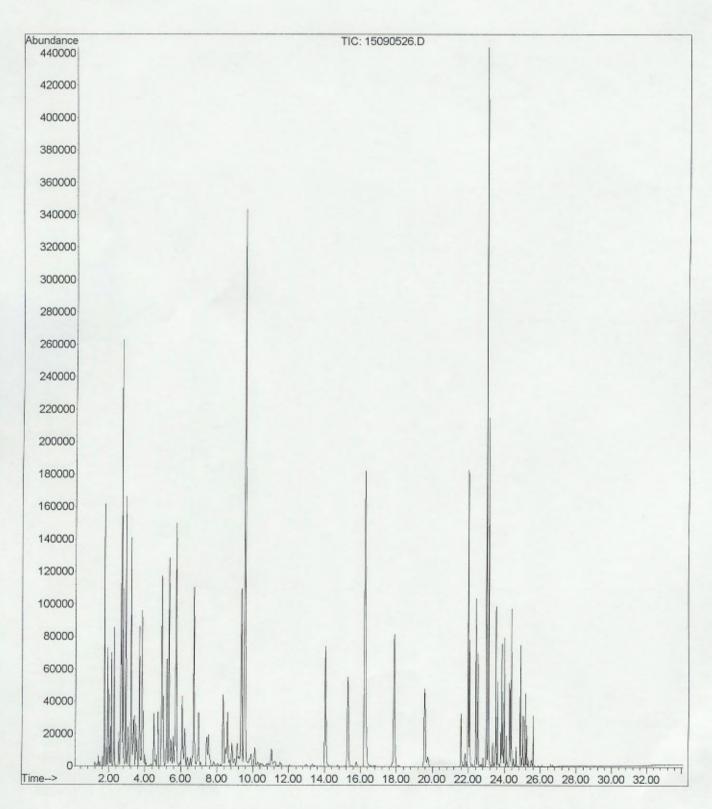
File :C:\MSDChem\1\DATA\2005-Sep-15-0948.b\15090526.D

Operator :

Acquired : 16 Sep 2005 11:25 am using AcqMethod VOCOXY.M

Instrument : PAL GCMS Sample Name: BI51901-BS1

Misc Info : Vial Number: 26



Appendix D

Central Contra Costa Sanitary District Special Discharge Permit

CENTRAL CONTRA COSTA SANITARY DISTRICT Class III Industrial User Permit

Industrial User Name:	Shimoff	& LAGER, cle Bent Horn (former Bea	icon Station)
Site Address:	2185 Solano	Way, Concord, California 94519	
Mailing Address:	2680 Bishop	Drive, Suite 203, San Ramon, CA 9458	3
Permit Issued: June Permit Renewal: May		Permit Fee through May 31, 2006 Permit Fee through May 31, 2007	\$ 351.00 to be billed

Certification

- The Industrial User agrees to comply with Title 10 of the District Code and the terms and conditions of this permit.
- The Industrial User understands that this permit may be revoked and permission to discharge may be denied.
- The Industrial User shall be liable for all damages, direct and consequential, caused by violating the terms and conditions of this permit.

"I am an authorized representative of the Industrial User as specified in CCCSD Code Title 10.04.020 (B). I have authority to commit resources necessary to achieve and maintain compliance with the conditions of this permit. I have reviewed this permit document and understand the requirements contained herein."

Company Officer: Name:	Mansour Sephr
Title:	President
. Signature:	Juffle
Date:	5-3-05

Definition of Authorized Representative of Industrial User: An authorized representative of an industrial user may be: (1) the principal executive officer, if the industrial user is a corporation; (2) general partner or proprietor if the industrial user is a partnership or proprietorship, respectively; (3) duly authorized representative of the individual designated above if such representative is responsible for the overall operation of the facilities from which the discharge originates and if such representative is identified in writing by the individual designated in (1) or (2) above.

Authorization

The Industrial User is authorized to discharge wastewater to the sanitary sewer, subject to the Industrial User's compliance with Title 10 of the District Code, 40CFR, and the terms and conditions of this permit. This authorization is conditional on the Industrial User signing and returning the above certification to the District's Source Control Section.

Central Contra Costa Sanitary District

Name:	Timothy L. Potter	
Title:	Source Control Program Superintendent	
Signature:	Junothy follow	
Date:	4/28/05	

Appendix E

Chain of Custody Form

and

Laboratory Report of the Treatment System Samples



819 Striker Ave Ste 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100 www.sequoialabs.com

27 September, 2005

Tony Perini Soma Environmental Eng. 6620 Owens Drive, Suite A Pleasanton, CA. 94588

RE: N/A

Work Order: S509179

Enclosed are the results of analyses for samples received by the laboratory on 09/09/05 11:45. If you havany questions concerning this report, please feel free to contact me.

Sincerely,

Tami Lindsay Project Manager

CA ELAP Certificate #1624

Jami Linday



819 Striker Ave Ste 8 Sacramento, CA 95834 (916) 921-9600 FAX (916) 921-0100 www.sequoialabs.com

Soma Environmental Eng. 6620 Owens Drive, Suite A Pleasanton CA., 94588

Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

S509179
Reported:
09/27/05 13:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Effluent	S509179-01	Water	09/09/05 11:00	09/09/05 11:45
Influent	S509179-02	Water	09/09/05 11:05	09/09/05 11:45





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

S509179
Reported:
09/27/05 13:36

Purgeable Hydrocarbons by EPA 8015B Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Note
Effluent (S509179-01) Water Sam	pled: 09/09/05 11:00	Received:	09/09/05	11:45					
Gasoline Range Organics (C4-C12)	ND	50	ug/l	1	5090155	09/13/05	09/13/05	EPA 8015B- VOA	
Surrogate: 4-BFB (FID)		70 %	60-	140	"	"	"	"	
Surrogate: a,a,a-TFT (PID)		81 %	60-	140	"	"	"	"	
Influent (S509179-02) Water Sam	pled: 09/09/05 11:05	Received:	09/09/05	11:45					
Gasoline Range Organics (C4-C12)	16000	2500	ug/l	50	5090155	09/13/05	09/13/05	EPA 8015B- VOA	
Surrogate: 4-BFB (FID)		96 %	60-	140	"	"	"	н	
Surrogate: a,a,a-TFT (PID)		85 %	60-	140	"	"	"	и	





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

S509179 Reported: 09/27/05 13:36

Extractable Hydrocarbons by EPA 8015B Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (S509179-01) Water Sampled	: 09/09/05 11:00	Received:	09/09/05	11:45					
Diesel Range Organics (C10-C28)	ND	50	ug/l	1	5090131	09/12/05	09/12/05	EPA 8015B- SVOA	
Surrogate: Octacosane		58 %	50-	.150	"	"	"	"	
Influent (S509179-02) Water Sampled	: 09/09/05 11:05	Received:	09/09/05	11:45					
Diesel Range Organics (C10-C28)	4000	100	ug/l	2	5090131	09/12/05	09/13/05	EPA 8015B- SVOA	
Surrogate: Octacosane		102 %	50-	150	"	"	"	"	





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

\$509179 Reported: 09/27/05 13:36

MTBE by EPA 8021B

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (S509179-01) Water	Sampled: 09/09/05 11:00	Received:	09/09/05	11:45					
Methyl tert-butyl ether	ND	2.0	ug/l	1	5090155	09/13/05	09/13/05	EPA 8021B	
Surrogate: a,a,a-TFT (PID)		81 %	60-	-140	"	"	,,	"	
Influent (S509179-02) Water	Sampled: 09/09/05 11:05	Received:	09/09/05	11:45					
Methyl tert-butyl ether	370	100	ug/l	50	5090155	09/13/05	09/13/05	EPA 8021B	
Surrogate: a,a,a-TFT (PID)		85 %	60-	-140	"	"	н	n	





Project:N/A Project Number:2463-Solano Wy, Concord Project Manager:Tony Perini \$509179 **Reported:** 09/27/05 13:36

Purgeable Aromatics by EPA Method 602 Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Effluent (S509179-01) Water	Sampled: 09/09/05 11:00	Received:	09/09/05	11:45					
Benzene	ND	0.50	ug/l	1	5090155	09/13/05	09/13/05	EPA 602	
Toluene	ND	0.50	**	n	61	"	**	"	
Ethylbenzene	ND	0.50	n	n	**	**	"	н	
Xylenes (total)	ND	0.50	41	n	**	n	н	н	
Surrogate: a,a,a-TFT (PID)		81 %	60-	-140	"	"	"	"	
Influent (S509179-02) Water	Sampled: 09/09/05 11:05	Received:	09/09/05	11:45					
Benzene	350	25	ug/l	50	5090155	09/13/05	09/13/05	EPA 602	*****
Toluene	800	25	н	**	"	ч	"	n	
Ethylbenzene	310	25	n	"		n	11	n n	
Xylenes (total)	2100	25	n	н	"	"	"	н	
Surrogate: a.a,a-TFT (P1D)		85 %	60-	140	"	"	"	<i>"</i>	





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

S509179 Reported: 09/27/05 13:36

Purgeable Hydrocarbons by EPA 8015B - Quality Control Sequoia Analytical - Sacramento

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 5090155 - EPA 5030B (P/T) /	EPA 8015B-VC)A								
Blank (5090155-BLK1)				Prepared a	& Analyze	ed: 09/13/	05			
Gasoline Range Organics (C4-C12)	ND	50	ug/l							
Surrogate: 4-BFB (FID)	7.13		"	10.0		71	60-140			
Surrogate: a.a,a-TFT (PID)	8.47		"	10.0		85	60-140			
Laboratory Control Sample (5090155-B	S1)			Prepared .	& Analyz	ed: 09/13/	05			
Gasoline Range Organics (C4-C12)	80.8	50	ug/l				70-130			
Surrogate: 4-BFB (FID)	7.63		- 11	10.0	,	76	60-140			
Surrogate: a.a,a-TFT (PID)	8.24		"	10.0		82	60-140			
Matrix Spike (5090155-MS1)	Source: S50	9179-01		Prepared	& Analyz	ed: 09/13/	05			
Gasoline Range Organics (C4-C12)	78.4	50	ug/1		ND		60-140			
Surrogate: 4-BFB (FID)	6.92		"	10.0	,	69	60-140			
Surrogate: a,a,a-TFT (PID)	7.96		"	10.0		80	60-140			
Matrix Spike Dup (5090155-MSD1)	Source: S50	9179-01		Prepared	& Analyz	ed: 09/13/	05			
Gasoline Range Organics (C4-C12)	83.2	50	ug/l		ND		60-140	6	25	
Surrogate: 4-BFB (FID)	6.92		"	10.0		69	60-140			
Surrogate: a,a.a-TFT (PID)	8.15		"	10.0		82	60-140			





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

S509179
Reported:
09/27/05 13:36

Extractable Hydrocarbons by EPA 8015B - Quality Control Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5090131 - EPA 3510C / EPA	A 8015B-SVQA									
Blank (5090131-BLK1)				Prepared	& Analyze	ed: 09/12/	05			
Diesel Range Organics (C10-C28)	ND	50	ug/l							
Surrogate: Octacosane	25.7		"	20.0	* ***	128	50-150			
Laboratory Control Sample (5090131	-BS1)			Prepared	& Analyze	ed: 09/12/	05			
Diesel Range Organics (C10-C28)	436	50	ug/l	500		87	60-140			
Surrogate: Octacosane	13.0		"	20.0		65	50-150			
Laboratory Control Sample Dup (509	0131-BSD1)			Prepared	& Analyze	ed: 09/12/	05			
Diesel Range Organics (C10-C28)	419	50	ug/l	500		84	60-140	4	50	
Surrogate: Octacosane	12.9		"	20.0	 -	64	50-150			





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

\$509179 **Reported:** 09/27/05 13:36

MTBE by EPA 8021B - Quality Control Sequoia Analytical - Sacramento

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 5090155 - EPA 5030B (P/T) /	EPA 8021B									
Blank (5090155-BLK1)				Prepared	& Analyz	ed: 09/13/	05			
Methyl tert-butyl ether	ND	2.0	ug/l							
Surrogate: a,a,a-TFT (PID)	8.47		"	10.0		85	60-140			
Laboratory Control Sample (5090155-B	S1)			Prepared	& Analyz	ed: 09/13/	05			
Methyl tert-butyl ether	7.99	2.0	ug/l	10.0		80	70-130			
Surrogate: a,a,a-TFT (PID)	8.24		"	10.0		82	60-140			
Matrix Spike (5090155-MS1)	Source: S5	09179-01		Prepared	& Analyz	ed: 09/13/	05			
Methyl tert-butyl other	8.39	2.0	ug/l	10.0	ND	84	60-140			
Surrogate: a,a,a-TFT (P1D)	7.96		"	10.0		80	60-140			
Matrix Spike Dup (5090155-MSD1)	Source: S5	09179-01		Prepared	& Analyz	ed: 09/13/	05			
Methyl tert-butyl ether	8.77	2.0	ug/l	10.0	ND	88	60-140	4	25	
Surrogate: a,a,a-TFT (PID)	8.15		"	10.0		82	60-140			





Project:N/A
Project Number:2463-Solano Wy, Concord
Project Manager:Tony Perini

\$509179 **Reported:** 09/27/05 13:36

Purgeable Aromatics by EPA Method 602 - Quality Control Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 5090155 - EPA 5030B (P/T) / EP	A 602									
Blank (5090155-BLK1)				Prepared a	& Analyze	ed: 09/13/0	05			
Benzene	ND	0.50	ug/l							
Toluene	ND	0.50	н							
Ethylbenzene	ND	0.50	*1							
Xylenes (total)	ND	0.50	**							
Surrogate: a,a,a-TFT (PID)	8.47	_,	и	10.0		85	60-140			
Laboratory Control Sample (5090155-BS1)	I.			Prepared a	& Analyze	ed: 09/13/0	05			
Benzene	8.04	0.50	ug/l	10.0		80	70-130			
Toluene	7.83	0.50	"	10.0		78	70-130			
Ethylbenzene	7.91	0.50	**	10.0		79	70-130			
Xylenes (total)	23.3	0.50	15	30.0		78	70-130			
Surrogate: a,a,a-TFT (PID)	8.24		"	10.0		82	60-140			
Matrix Spike (5090155-MS1)	Source: S:	509179-01		Prepared	& Analyze	ed: 09/13/	05			
Benzene	8.10	0.50	ug/l	10.0	ND	81	60-140			
Toluene	7.84	0.50	"	10.0	ND	78	60-140			
Ethylbenzene	7.91	0.50	"	10.0	ND	79	60-140			
Xylenes (total)	23.3	0.50	"	30.0	ND	78	60-140			
Surrogate: a.a.a-TFT (PID)	7.96		"	10.0		80	60-140			
Matrix Spike Dup (5090155-MSD1)	Source: S:	509179-01		Prepared	& Analyze	ed: 09/13/	05			
Benzene	8.19	0.50	ug/l	10.0	ND	82	60-140	1	25	
Toluene	7.97	0.50	*1	10.0	ND	80	60-140	2	25	
Ethylbenzene	8.05	0.50	11	10.0	ND	80	60-140	2	25	
Xylenes (total)	23.7	0.50	U	30.0	ND	79	60-140	2	25	
Surrogaie: a.a.a-TFT (PID)	8.15			10.0		82	60-140			



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Notes and Definitions

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified

NR Not Reported

dry Sample results reported on a dry weight basis

RPD Relative Percent Difference